

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1155—Vol. XXVII.]

LONDON, SATURDAY, OCTOBER 10, 1857.

STAMPED . . . SIXPENCE.

UNSTAMPED . . . FIVEPENCE.

**MR. JAMES CROFTS, MINING AND SHAREBROKER,**  
No. 1, FINCH LANE, LONDON (established 14 years), TRANSACTS every  
kind of BUSINESS IN MINING SHARES, but, not being a DEALER, BUYS and SELLS  
only on orders confided to him.

Mr. Crofts calls special attention to CATHERINE and JANE CONSOLS, lead and iron,  
Merioneth, North Wales, which it is estimated will be in the Dividend List early next  
year. For sales of land see monthly, as the reports from Holywell. The iron lode  
is being developed, and the ore shipped to market with all possible expedition.  
Mr. Crofts also very strenuously recommends Vals of Towy Mine, lead, now  
paying dividends.

Mr. Crofts believes that St. Day United, under present management, will con-  
siderably advance in value.

Mr. Crofts considers the following shares also worth immediate attention at the  
present prices:—

Pendron Consols.	Providence Mines.
West Edward.	Alfred Consols.
Kelly Bray.	Wheal Arthur.
North Wharf Bassett.	Wheal Sidney.
Boiling Well.	Lady Bertha.
Portkella United.	Great Wheal Busy.
Wheal Margery.	Herodafot.
	Wheal Margery.

CATHERINE and JANE CONSOLS.—Mr. Crofts has special and important  
business to transact in the NEW SHARES of these promising MINES. Copies of  
report of meeting (20th September) to be had of Mr. Crofts, on application.

**MR. JAMES LANE, MINING SHARE DEALER,**  
29, THREADNEEDLE STREET, LONDON, has BUSINESS in—

Mary Ann.	Stridgell Consols.
Trilway.	Calstock Consols.
Kelly Bray.	East Russell.
Wheal Edward.	Lady Bertha.

**FOR SALE, at NETT PRICES, for immediate delivery:—**

5 Alfred Consols.	5 Margery, £13.	5 Lelant Consols, £3.
1 Botalack.	20 Treveltha, £3.	1 East Bassett.
1 Bassett, £30s.	10 East Alfred.	1 Uuy.
5 North Bassett.	20 Stridgell, £25.	18 Ludcott.
1 Margaret.	5 South Carr Bros.	20 Kelly Bray.
	1 Gram and St. Aubyn.	

Apply to J. B. BARNARD, 11, Royal Exchange, London, E.C.

**PETER WATSON (Member of Mining Exchange), MINING  
BROKER, STOCK and SHARE DEALER, will EXECUTE all ORDERS con-  
fided to him with care and punctuality. Commission on all transactions, 1% per cent.  
87, Threadneedle-street, London.**

Bankers—Union Bank of London.

**MR. LELAND is a BUYER and SELLER of the following  
SHARES, at market prices:—**Lady Bertha, Margery, Edward, North Le-  
land, Providence, Alfred Consols.  
Mr. Leland is also a SELLER of 100 East Providence, 25 West Poltherro, 10s.; 5  
Trilway, 10 Wheal Wrey, 50 Catherine and Jane, 100 West Far, 2 1/2 Treveltha, 10s.; 5  
10 North Caradon, 32 South Bog, £3; 25 Ding Dong, 300 Mollard, 1s. 6d.; 10 West  
Nantymwyn, 30s.; 50 Balmoun, £3; 10 East Margaret, £25; 20 Pendron, 40s. 9d.  
4, Cashion-court, Old Broad-street, E.C.

**TO CAPITALISTS.—RELIABLE INFORMATION** may be  
obtained on application to the undersigned, in respect of MISCELLANEOUS  
SECURITIES generally, BANKS, INSURANCE SHARES, LAND COMPANIES,  
MINES (British and Foreign), RAILWAYS, FOREIGN STOCKS, and the PUBLIC  
FUNDS BOUGHT and SOLD at the current market prices, and at moderate com-  
mission. References given and required. JOHN BATES, Stock and Sharebroker,  
28, Throgmorton-street, London, E.C.

**MR. F. E. BLYTH, MINING SHAREBROKER, No. 1, ST.  
MICHAEL'S ALLEY, CORNHILL, is commissioned to SELL SHARES in  
most of the DIVIDEND and PROGRESSIVE MINES. As Mr. Blyth continues him-  
self to transact business, the utmost reliance can be placed that all busi-  
ness entrusted to him will meet with prompt attention and regularity.**

**JAMES H. COCK, MINE SHAREBROKER, GENERAL  
COMMISSION AGENT, and ACCOUNTANT, REDBETH, CORNWALL.**  
Orders for the PURCHASE and SALE of MINE SHARES, MINING MAT-  
TERIALS, &c., promptly attended to.

**CAPT. THOMAS DUNN, of TAVISTOCK, undertakes to INSPECT,  
REPORT, and SURVEY any MINES or MINERAL PROPERTY in ENGLAND,  
IRELAND, SCOTLAND, or WALES. No objection to take the management  
of any mine or mines in the neighbourhood of Tavistock.**

**JOHN GLEDHILL and CO. MINE AGENTS, SHARE  
BROKERS, and GENERAL DEALERS.**  
MINING RECORDS OFFICE, 7, SOUTH PARADE, LEEDS.

Mines well selected are the best investments, paying from 15 to 20 per cent. on the  
cost. They have to OFFER SHARES in most of the DIVIDEND and PRO-  
GRESSIVE MINES, and are ready to give every information relative to all mining  
matters.—Dated Oct. 9, 1857.

**MR. HENRY GOULD SHARP will be happy to receive BUYING  
and SELLING ORDERS in every description of MINING, BANK, RAIL-  
WAY, INSURANCE, and OTHER SHARES. All town and country comman-  
dations will be punctually attended to; and every information afforded to parties hav-  
ing spare capital to invest, as to those mines likely to prove most remunerative.**

Mr. H. G. SHARP recommends any of the following for present investment:—  
Alfred Consols. East Wheal Russell. Kelly Bray. Bedford Consols.  
Stridgell Consols. Chollacott Consols. Boiling Well. Carrvannell  
Ding Dong. Great Wheal Busy. Gwennow. Pendron  
Great Caradon. Lady Bertha. Great Wheal Busy. Great Alfred  
Alfred United. Hunkworthy Bridge. Par Consols. Wheal Harriett  
Wheal Wrey. Hunkworthy Bridge. Par Consols. Whitechapel Consols

Mr. H. G. SHARP is instructed to SELL:—  
50 Buller and Bassett. 10 East Alfred. 50 Lady Bertha.  
50 Hunkworthy Bridge. 150 Chollacott Consols, 5s. 20 Lady Wheal Russell.  
Offices, 2, Church-court, Clement's-lane, Lombard-street, London.

**MR. H. G. GOMPERTS is a BUYER OF—**

10 Herodafot.	20 Hawkmoor.	5 Bedford United.
20 Stridgell Cons., £25.	20 Hingston Down, £5.	100 Lady Bertha, 15s.
5 Buller, £210.	5 Rosewarne Unit., £25.	10 Gwennow, £10.
10 Alfred Consols, £13.	20 Edward, £25.	100 East Russell, £15.
20 Balmoun, £3.	20 Gwennow, 3s. 6d.	50 Pendron-drea.
50 Gwennow.	20 Great Alfred.	5 Wheal Margaret.

And a SELLER of—

5 Pendron, £25.	20 Edward, £25.	100 Devon and Court, 5s.
5 Devon Buller, 30s.	10 Kelly Bray, 3s. 6d.	50 Buller and Bassett.
5 Wheal Ludcott.	10 Wheal Wrey.	5 Lelant Consols.
5 West Grenville.	50 Colledge Mines.	50 South Bog.

4, Crown-court, Threadneedle-street.

**MINING SHARES FOR SALE.—**

10 Alf. Con., £13.	50 Vals of Towy, 30s.	10 Lelant Consols, £15.
20 Cradock Mine, £45.	5 Wh. Margaret, £35.	5 North Frances, £15.
5 Ding Dong, £25.	5 Wh. Wrey, £25.	5 North Bury, £25.
50 Drake Walls, £25.	25 Baller and Bassett Unit.	100 Tolvig Unit., £50.
5 East Margaret, £15.	5 Alf.	100 Pendron, £25.
1 Gram and St. Aubyn.	10 East Alfred, £25.	50 South Cuddra, £15.
5 East Consols, £15.	20 E. Wh. Russell, £25.	100 Virtuous Lady and Wh.
5 Rosewarne Unit., £25.	50 Great Howas, 30s.	Bedford, 17s. 6d.
5 South Frances, £25.	5 Great Alfred, £25.	10 Wheal Edward, £25.
5 St. Day Unit., 30s. 6d.	10 Kelly Bray, 3s. 6d.	25 Wh. Harriett, 12s. 6d.
	50 Lady Bertha, 30s. 9d.	15 Tolvig, 4s. 3d.

Apply to WILLIAM MITCHELL, 2, Austinfriars, London, E.C.

W. MITCHELL having recently inspected the underground workings and prospects  
of several mines in Devon, he is quite prepared to advise his friends as to the prob-  
ability of a rise in the price of some, whilst he has no doubt there must be a drop in  
the price of others.—Oct. 9, 1857.

**UNSUCCESSFUL INVESTMENT IN BRITISH MINES** depends on  
the nature of the mining operations and the market should not under the direction  
of an EXPERIENCED AGENT; and as such, the undersigned OFFERS HIS SER-  
VICE to the public in effecting PURCHASES and SALES of MINING, RAILWAY,  
INSURANCE, CANAL, and any other description of stock, &c.

Mr. Crofts calls special attention to CATHERINE and JANE CONSOLS, lead and iron,  
Merioneth, North Wales, which it is estimated will be in the Dividend List early next  
year. For sales of land see monthly, as the reports from Holywell. The iron lode  
is being developed, and the ore shipped to market with all possible expedition.  
Mr. Crofts also very strenuously recommends Vals of Towy Mine, lead, now  
paying dividends.

Mr. Crofts believes that St. Day United, under present management, will con-  
siderably advance in value.

Mr. Crofts considers the following shares also worth immediate attention at the  
present prices:—

Pendron Consols.	Providence Mines.
West Edward.	Alfred Consols.
Kelly Bray.	Wheal Arthur.
North Wharf Bassett.	Wheal Sidney.
Boiling Well.	Lady Bertha.
Portkella United.	Great Wheal Busy.
Wheal Margery.	Herodafot.
	Wheal Margery.

CATHERINE and JANE CONSOLS.—Mr. Crofts has special and important  
business to transact in the NEW SHARES of these promising MINES. Copies of  
report of meeting (20th September) to be had of Mr. Crofts, on application.

**MR. JAMES LANE, MINING SHARE DEALER,**  
29, THREADNEEDLE STREET, LONDON, has BUSINESS in—

Mary Ann.	Stridgell Consols.
Trilway.	Calstock Consols.
Kelly Bray.	East Russell.
Wheal Edward.	Lady Bertha.

**GEORGE MOORE, DEALER IN MINING SHARES,**  
1, CROWN COURT, THREADNEEDLE STREET, E.C.

GEORGE MOORE will SELL the following SHARES, or any of them, FREE OF  
COMMISSION:—

5 Alfred Consols, £13.	5 Great Wh. Alfred, 6s.	20 Stridgell Cons., £25.
10 Bedford United, £7.	20 Great Baddern, 12s. 6d.	20 Tamar Consols, £15.
25 Boiling Well, 3s. 9d.	10 Hingston Down, £5.	25 Treveltha, £25.
1 Colliambs.	20 Kelly Bray, 3s. 9d.	50 Vals of Towy, 15s. 9d.
50 Catherine and Jane, 2s.	50 Lady Bertha (call pd.),	5 West Bassett, £25.
5 Giljiah and Wentw., 5s.	5 Alf.	5 Wh. Kitty (Lel.), £25.
10 Drake Walls, 4s. 9d.	10 Lelant Consols, £15.	1 Wh. Margaret, £25.
10 East Alfred Cons., £25.	1 North Rocker, £15.	1 Wh. Treilway, £25.
20 East Russell, £25.	10 North Bassett, £15.	5 Wheal Wrey, £5.
10 Garreg, 5s.	20 Pendron Cons., 5s. 3d.	10 Wheal Edward, £25.
50 Gwennow, 3s. 6d.	10 Portkella United, £5.	20 Wh. Ludcott, 3s. 9d.

In any business that GEORGE MOORE is favoured with, in which he is the buyer, he  
will give CASH ON RECEIPT OF TRANSFER; and will allow any purchaser of  
undoubted respectability to have shares registered, and receive certificates of same,  
previous to payment.

**MESSRS. J. J. REYNOLDS AND SON,**  
STOCK, RAILWAY, AND MINING SHAREBROKERS, No. 1, ROYAL  
EXCHANGE BUILDINGS, LONDON, E.C. TRANSACTIONS IN BRITISH  
AND FOREIGN MINES, STOCKS, and RAILWAY SHARES, on the usual com-  
mission. The Stock Exchange List of Prices transmitted by post, with special remarks,  
dictated by the circumstances of the day, for the information of correspondents.  
Messrs. J. J. REYNOLDS and Son would direct attention to the undermentioned  
mining properties, as being well worthy of notice, more particularly to West Seton,  
Tincroft, North Levant, South Frances, North Frances, and the United Mines, for  
the investment of capital; and, on account of the exceedingly low prices of the shares,  
to North Crofty, Camborne Veas, and East Rosewarne, for speculators.

**DIVIDEND-PAYING MINES.**

Alfred Consols.	Great South Tolvig.	Vals of Towy.
Bedford United.	Herodafot.	Wendron Consols.
Botalack.	Isle of Man.	West Bassett.
Corn Bros.	Levant.	West Caradon.
Condurrow.	Miners Mines.	West Wheal Seton.
Cwmystwith.	North Rocker.	Wheal Bassett.
Derwent Mines.	North Wheal Bassett.	Wheal Buller.
Dolcoath.	Par Consols.	Wheal Cuddra.
Drake Walls.	Rosewarne United.	Wheal Margaret.
East Dore.	South Wheal Frances.	Wheal Mary Ann.
East Pool.	St. Day United.	Wheal Seton.
Exmouth.	Tincroft.	Wheal Wrey.
Fowey Consols.	United Mines.	

**PROGRESSIVE MINES.**

Balmoun.	East Tolvig.	Queen of Dart.
Bedford Consols.	East Treveltha.	Silver Wharf.
Bedford Consols.	Great Caradon.	South Carr Bros.
Calstock United.	Great Wheal Dury.	South Wheal Ellen.
Catherine and Jane.	Lady Bertha.	Treveltha.
Copper Hill.	New Treveltha Consols.	Trilway.
Devon and Cornwall Unit.	North Buller.	Treveltha.
Devon Wheal Buller.	North Wheal Robert.	Treveltha United.
East Alfred.	North Wheal Robert.	West Alfred.
East Bassett.	North Wheal Robert.	West Crinnis and Regent.
East Bendor.	North Wheal Wrey.	West Cupid.
East Kitt Hill.	Old Tolvig.	Wheal Edward.
East Rosewarne.	Pendron Consols.	Wheal Emma.
East Rosewarne.	Portkella.	Wheal Margery.

**MESSRS. POWELL AND COOKE,**  
8, HERCULES CHAMBERS, OLD BROAD STREET, LONDON.

Messrs. POWELL and COOKE TRANSACTIONS IN BRITISH  
AND FOREIGN MINES, STOCKS, and RAILWAY SHARES, at net prices, or on com-  
mission, at the option of their friends, in all well conducted DIVIDEND and PRO-  
GRESSIVE MINES, and are prepared to DEAL in the SHARES of the following  
MINES at market prices:—Stridgell Consols, Vals of Towy, Hingston Down, Great  
Wh. Alfred, Portkella United, Lady Bertha, Gwennow United, Catherine and Jane, Wh.  
Edward, Kelly Bray, and other well managed Dividend and good Progressive Mines.

**JAMES HERRON has FOR SALE the following SHARES, at the  
prices quoted, and FREE OF COMMISSION:—**

15 Bryant.	10 Grenville.	1 Rosewarne, £20.
1 Botalack.	20 Great Howas, 10s. 9d.	20 St. John del Rey.
20 Catherine and Jane, 9s. 9d.	5 Herodafot, £15.	5 South Caradon, £25.
1 Cefn Brynno, £45.	5 Hingston Down, £5.	10 St. Aub. & Grylls, £35.
20 Chollacott Mines, 4s. 9d.	5 Holmby, 5s. 6d.	20 So. Condurrow, 5s. 9d.
20 Colledge Mines, 4s. 9d.	10 Kelly Bray, 3s. 9d.	20 Tamar Cons., 3s. 9d.
20 Drake Walls, £11 1/2.	20 Lewis.	10 Treveltha, 25s.
10 Dyffryn Castell, 3s. 9d.	20 Lady Bertha, 30s. 9d.	1 Treveltha, £25.
10 East Buller, 3s. 9d.	20 North Treveltha.	5 Wheal Wrey.
20 East Tamar, 12s. 9d.	4 North Bassett, £10.	2 Wheal Margaret.
5 East Treveltha, £15.	20 North Crofty, £15.	1 Wh. Mary Ann, £45.
5 East W. Ross, £25.	20 Penn. & B. Croft, 10s. 9d.	10 Wheal Edward, £25.
10 Gwennow United, 23s. 9d.	20 Penn. and B. Croft, 3s. 9d.	5 West Bassett, £25.
10 Great Alfred, £25.	10 Pendron Cons., 4s. 9d.	50 West Par Consols.

Mr. HERRON recommends the following Dividend Mines, which will pay 20 per  
cent. upon the average:—Wheal Margaret, Mary Ann, Treilway, Vals of Towy,  
Drake Walls, South Caradon, West Caradon, Par Consols, Herodafot, Kitty (Lelant).  
And the following Progressive Mines:—Penn. and B. Croft, North Down, Kelly Bray,  
and St. Aubyn and Grylls.

The fact of the London daily press now giving a place in their columns to the  
business done in British mines, together with the increasing circulation of the Mining  
Journal, which is the most intimately connected with these interests, show that the  
public are turning their attention to British mines, as a beneficial and legitimate  
mode for the investment of capital. This need not create much surprise, as the hi-  
therto favourite channels for investment—viz., railways, joint-stock banks, turnpike  
trusts, and foreign gold schemes—have been attended with such very disastrous con-  
sequences to all concerned in them.

3, Adam's-court, Old Broad-street, London, Oct. 9, 1857.

**MESSRS. VIVIAN AND REYNOLDS, MINE AGENTS.**  
68, OLD BROAD STREET, LONDON, E.C.

Messrs. VIVIAN and REYNOLDS, through the long experience of Mr. W.  
C. Vivian as an underground agent and manager of mines in Cornwall, and in various  
foreign countries, to afford information on most important mining districts; and to  
inspect and report on mines. They are also enabled, by the several years' acquain-  
tance of Mr. J. J. Reynolds, jun., with the transaction of the London share market, to  
obtain every advantage for those who may want either to buy or sell mining or any  
other description of stock.

Messrs. VIVIAN and REYNOLDS have daily information from the principal seats of  
mining, which is at the service of those who may honour them with their confidence.  
The value of mining stock generally is advancing, owing to the sounder business  
principles which are being introduced into this great branch of industry, and to the  
brilliant prospects which the present high price of metals give to mining enterprise.  
Messrs. VIVIAN and REYNOLDS are of opinion that there never was a period when  
mining stock offered to enterprise so much safety, combined with such good chances  
of rapidly increasing value; and, from information recently received, they would di-  
rect the attention of capitalists to the following mines, as being sound undertakings,  
and their market value not in proportion to their prospects:—

North Rocker.	East Rosewarne United.	West Stray Park.
North Frances.	Camborne Veas.	East Alfred.
North Wheal Crofty.	Stray Park.	

Messrs. VIVIAN and REYNOLDS are SELLERS of the following SHARES:—

1 West Bassett, £207.	5 North Frances, £15.	5 Stray Park, £25.
1 South Frances, £245.	10 East Alfred, £15 1/2.	1 Rosewarne, £20.
1 West Seton, £150.	1 United.	5 Camborne Veas, £55.
1 North Rocker, £140.	10 Grenville.	1 Margaret, £25.
5 Alfred Consols, £13.	5 Treveltha, £25.	10 North Bassett, £15.
10 Tincroft, £4 1/2.	5 North Crofty, £25.	5 St. G. Tolvig, £15.
20 Stridgell, £2 1/2.	20 E. Rosewarne, 17s. 6d.	25 West Grenville, 3s. 6d.
5 Edward, £25.	10 North Levant, £25.	

**MR. W. H. BRUMBY, STOCK and SHAREBROKER,**  
1, QUIET STREET, BATH, is in a position to give the BEST ADVICE in  
the SELECTION and PURCHASE of DIVIDEND and PROGRESSIVE MINES.

**MR. R. LINTHORNE, ENGLISH and FOREIGN MINING  
AGENT, 3, ADAM'S COURT, OLD BROAD STREET, LONDON.**  
BUSINESS TRANSACTIONS in all ENGLISH and FOREIGN MINES, and other  
SECURITIES, on the usual terms of commission. Information afforded in respect  
to Dividend-paying and Progressive Mines.

**MESSRS. A. J. HUTCHINGS and CO.'S  
PATENT IMPROVED WIRE ROPE.**

SOLE MAKERS TO THE  
LORDS OF THE ADMIRALTY, THE FRENCH and TURKISH GOVERNMENTS,  
And the principal Colliery Proprietors throughout the kingdom.  
MANUFACTORY, MILL WALL, POPLAR, LONDON.

ROUND and FLAT ROPES of every description, suitable for mining operations or  
other purposes, GALVANISED or UNGALVANISED, MANUFACTURED upon  
the newest and most improved machinery, ensuring greater pliability, durability, and  
strength; and is admitted by the principal colliery proprietors to be far superior to any  
other kind of wire rope. The superiority of these ropes over hydrogen gas, in point  
of strength, lightness, durability, and cost, is admitted by all who have tried them.

GUIDE ROPES, SIGNAL CORD, LIGHTNING CONDUCTORS, &c.

**MESSRS. T. P. THOMAS AND SON,**  
MINING AGENTS,  
2, CROWN COURT, THREADNEEDLE STREET, LONDON;  
AND AT 11, DALE STREET, LIVERPOOL.

**VALUABLE MINING MACHINERY and MATERIALS FOR SALE,**  
AT WHEAL GILMAR, ST. ERTH, CORNWALL.

**MR. T. P. THOMAS** has been favoured with instructions to SELL,  
BY PUBLIC AUCTION, on the above MINE, on Wednesday, the 28th day  
of October inst., at Twelve o'clock, in suitable lots, the following very excellent  
MINING MACHINERY and MATERIALS:—viz., One 41 in. PUMPING ENGINE,  
7 ft. in shaft, and 9 ft. in cylinder, with 11 tons boiler; one 22 in. stamping and whim  
engine, 6 ft. stroke, equal beam, with 9 tons boiler.

10 heads stamps, with axle, brasses, &c., complete.	10 ft. working-barrel.	12 in. matching-piece.
Whim cage.	3 1/2 in. doorpieces.	50 fms. iron rods, 1 1/2 in. round.
Horse-whim, with shaft tackle, and pulleys, com- plete.	12 1/2 ft. 9 in. pumps.	67 fms. ditto ditto
12 in. H-piece.	11 fms. 7 in. main rods.	Tram wagon.
18 ft. 12 in. pump.	110 in. top doorpiece.	2 steam whim kibbles.
19 ft. 12 in. pump.	110 ft. 11 in. plunger-case.	3 windbores.
19 ft. 12 in. pump.	stuffing-box and gland.	2 1/4 ft. 14 in. matching- pieces.
18 ft. 12 in. plunger-case, with stuffing-box and gland.	6 1/2 in. boxes and prongs.	19 ft. 14 in. pump.
19 in. plunger-pole.	11 in. box and prong.	92 fms. 3/4 capstan-chain.
Stuffing-box and gland.	Wood cisterns, complete.	9-10 steam whim-chain.
12 ft. 6 in. working-bar.	1 1/4-arm capstan.	5 east-iron rolls.
11 ft. working-barrel.	Shears. Pulleys.	Armill and stock.
With dressing and other materials, smiths' tools, carpenters' stones, and other arti- cles, too numerous to mention.	2 balance-bobs, complete.	Vine and crane.
	Angle-bob.	130 in. bellows.
	10 in. plunger-pole.	Account-house furniture.

The above machinery and materials are all in first-rate working condition, and well  
situated for removal.

For further particulars, catalogues, and to view, apply to the captain, on the mine;  
and for catalogues, conditions, &c., apply to R. R. NICHOLS, Esq., Marazion, Corn-  
wall; and to the auctioneer, 3, Crown-court, Threadneedle-street, London.

**NOTICE OF REMOVAL.**

**MR. JOHN R. PIKE**, in acknowledging the liberal support he has  
received since commencing business as MINING and SHAREBROKER, begs  
to inform his friends that he has, for the greater facility of business, REMOVED to  
the above address, where he will continue the strictest attention to all business con-  
fided to him, whether in the purchase or sale of mining shares.

Mr. J. R. PIKE issues daily, when applied for, a List of transactions in the Mining  
Exchange, and he pledges himself to do business at a moderate rate of commission,  
and in all cases to carefully study the interests of his clients.—Friday, Oct. 2, 1857.

**WILLIAM MARLBOROUGH, MINING AGENT,**  
(For many years with Mr. T. P. Thomas),  
57, OLD BROAD STREET, LONDON.

**MR. WILLIAM MOORE, STOCK and SHAREDEALER,**  
11, HERCULES CHAMBERS, OLD BROAD STREET.

N.B. Business transacted in every description of stock and shares.

**MR. R. TREDINNICK, BROKER and GENERAL DEALER,**  
GRESHAM HOUSE, OLD BROAD STREET, LONDON.

**MINING OFFICES.—Mr. T. CARTHEW, ST. CLARE  
STREET, PENZANCE.**

**MR. FRANCIS R. BILL, CONTRACTOR, and GENERAL  
ACCOUNTANT and AUDITOR.**

39, BUCKLEBURY, LONDON, E.C.

CONTRACTOR for the SUPPLY of RAILWAY MATERIALS of every descrip-  
tion. Estimates prepared. Agencies undertaken. ACCOUNTANTSHIP BUSINESS  
of all kinds performed under contract, whereby a considerable saving on the usual  
cost may be effected.

**MR. F. LISABÉ, C.E., CONSULTING MINING ENGINEER,**  
OFFICE, 2, DAME STREET, DUBLIN.

Mr. LISABÉ may be CONSULTED personally, or by letter. His long experience  
in Ireland will be found useful to capitalists desirous of investing money in mining  
and other operations in that country.

**MR. H. HUXHAM, COLLIERY VIEWER and MINING  
ENGINEER,** having resigned the management of Cwmaberri Colliery, is  
NOW OPEN to PROFESSIONAL ENGAGEMENTS; and begs to assure those who  
may favour him with their commands that all business entrusted to his charge shall  
receive prompt attention, and be executed with the utmost fidelity and care. Refer-



# RIVER TAMAR COPPER MINING COMPANY (LIMITED).

Capital £10,000, in 10,000 shares of £1 each.—Deposit 5s. per share.

Calls not to exceed 5s., at intervals of not less than six months.

OFFICES.—10, KING ARMS YARD, MOORGATE STREET.

The River Tamar Copper Mining Company has purchased the sett hitherto known as the South Devon Great Consols Mine, under which appellation it has been prosecuted for upwards of four years last past, with the greatest vigour and judgment.

The mine is situated in a stratum of granite and killas, the former being exactly similar to the granite which yielded such great results at Gunns Lake; and the latter being in every respect like that which has yielded such unprecedented returns at the Great Devon. The presence and junction of these two formations are highly favourable to good deposits of copper, and the mine is traversed by cross-veins, which appear to be necessary to the development of profitable copper mines. The character of the lode at the shaft is wider than the general run of granite lodes, which is also a promising feature, and it runs nearly vertical, which is also a further advantage. Gossan is found in the lode as low as the 58, a good indication of a deep and profitable mine; and, lastly, the lode of copper ore which is found in this lode is of the highest possible quality, so that the smallest quantities would be remunerative. In these peculiarities, every known circumstance which tends to great success exists, and at the present time a discovery of a remunerative deposit may be made at any moment.

Applications for shares, according to the subjoined form, accompanied by the receipt of the bankers of the company for a deposit of 5s. per share on the number of shares applied for, may be made at the offices of the company, and all applications by former adventurers in the South Devon Great Consols Mining Company will have precedence.

## FORM OF APPLICATION FOR SHARES.

To the Directors of the River Tamar Copper Mining Company (Limited).

GENTLEMEN,—I request you to allot me shares of £1 each, in this company; and I hereby agree to accept the same, or any less number which you may allot me, and to execute the Articles of Association of the company when required; and on failure so to do, I consent to forfeit the deposit of 5s. per share now made with the bankers of the company.

Dated this day of 1857. Name in full..... Residence..... (State if an adventurer in the South Devon Great Consols Mining Company, and the number of the scrip certificate held.)

# CHEMICAL LABORATORY AND ASSAY OFFICE,

1, OXFORD COURT, CANNON STREET, LONDON, E.C.

Mr. R. V. TUSON, F.C.S., F.S.A. (late Demonstrator of Chemistry at St. Bartholomew's Hospital), may be CONSULTED on all SUBJECTS involving CHEMICAL PRINCIPLES; and is prepared to EXECUTE all kinds of METALLURGICAL, AGRICULTURAL, COMMERCIAL, and other ANALYSES.

Mr. TUSON has a vacancy for a pupil.

# ASSAY OFFICE AND LABORATORIES, DUNNING'S ALLEY, BISHOPSGATE STREET WITHOUT, LONDON.

Conducted by JOHN MITCHELL, F.C.S., Author of "Manual of Practical Assaying,"

Assays and Analyses of every description performed as usual. Special Instruction in Assaying and Analysis. Consultations in every branch of Metallurgical and Manufacturing Chemistry. Assistance rendered to intending Patentees, &c. For amount of fees, apply to the office, as above.

# MECHANICAL DRAWINGS, FOR PATENTS AND OTHER PURPOSES.—BARLOW AND CO. continue to PREPARE DRAWINGS of

all kinds of MACHINERY, for the SPECIFICATIONS of PATENTS and GENERAL USE. They also send a Circular of Information on Patents free by post on receipt of a stamped envelope. Cost of provision of an invention, 25s. 6d. The Patent Journal, edited by them from 1846, in numbers and volumes.

BARLOW AND CO., Office for Patents, 89, Chancery-lane, W.C.

# NEW PATENT ACT, 1852.—MR. CAMPIN, having advised

Patent Law Reform before the Government and Legislature, and in the pages of the Mining Journal, &c., is now READY to ADVISE and ASSIST INVENTORS in OBTAINING PATENTS, &c., under the NEW ACT.

The Circular of Information, gratis, on application to the Patent Office and Design Registry, 154, Strand.

## BY HER MAJESTY'S ROYAL LETTERS PATENT.

THE DISPATCH OIL SOCKET AND AXLE CLEANER.—To be set in the Hubs or Naves of all kinds of Wheels, in New or Old Carriages (with or without patent or close boxes), Coaches, Omnibuses, Cabs, Carriages, Heavy Wagons, Artillery, Dray Carts, &c., of every description. For OILING and thoroughly CLEANING the AXLES without taking off the wheels, and in one minute.

For LICENSES or EXCLUSIVE RIGHTS to apply the OIL SOCKET AND AXLE CLEANER throughout the United Kingdom, address to owner, Mr. CHARLES BROWN, Barborough, near Chesterfield. Office and shop for applying the Oil Socket, &c., at the Saw Mills, Barborough; at the Crown Works, Pond Hill, Sheffield; and at all authorised agents throughout the kingdom.

# DO YOU LOCK UP YOUR CASH AND BOOKS?

If not, lose no time in getting one of GRIFFITHS' SECOND-HAND FIRE and THIEF-PROOF SAFES, for bankers, shippers, merchants, or public companies, by the most eminent makers, at half the cost of new. WROUGHT-IRON DOORS for strong rooms and party walls. Price of safes, 24 in. height, 18 in. width, and 16 in. depth, £8 10s. All safes from this establishment warranted to be fire-resisting, sound, perfect, and quite equal to new.

C. H. GRIFFITHS, 191, Whitechapel-road, near Mile End-gate, E. N.B. Fire-proof Safes, Iron Doors, or Office Furniture bought.

## INVESTMENTS IN BRITISH MINES.

Full particulars of the most important Dividend and Progressive Mines will be found in the Fourth Edition of

# BRITISH MINES CONSIDERED AS AN INVESTMENT,

Recently published, by J. H. MURCHISON, Esq., F.G.S., F.S.S. (p. 356; price 5s. 6d., by post 6s.).

Mr. Murchison also publishes a QUARTERLY REVIEW OF BRITISH MINING, giving, at the same time, the Position and Prospects of the Mines at the end of each Quarter, the Dividends Paid, &c. The Review for the Quarter ending the 30th of June, contains a Map of the Great Wreath Vor and Lelant Mining Districts, price 1s. Reliable information and advice will at all times be given by Mr. Murchison, either personally or by letter, at his offices, 117, Bishopsgate-street Within, London, where copies of the above publications can be obtained.

## OPINIONS OF THE PRESS.

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments.—Mining Journal.

The book will be found extremely valuable.—Observer.

A valuable little book.—Globe.

A valuable guide to investors.—Herald.

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares the information which should prevent rash speculation and unproductive outlay of capital in mines.—Morning Herald.

Of special interest to persons having capital employed, or who may be desirous of investing in mines.—Morning Chronicle.

Of great value to capitalists.—Sunderland Times.

Parties requiring information on mining investments will find no better and safer instructor than Mr. Murchison.—Leeds Times.

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains more information on the subject of which it treats.—Derby Telegraph.

To those who wish to invest capital in British mines, this work is of the first importance.—Wealthman.

This work enables the capitalist to invest on sound principles; it is, in truth, an excellent guide.—Plymouth Journal.

All who have invested, or intend to invest, in mines, will do well to consult this very useful work.—Liverpool Express.

This is really a practical work for the capitalist.—Stockport Advertiser.

Persons desirous to invest their capital in mining speculations, will find this work a very useful guide.—Warwick Advertiser.

It is full of carefully compiled and reliable information relative to all the known mines in the United Kingdom.—Sheffield Free Press.

Those interested in mining affairs, or who are desirous of becoming speculators, should obtain and carefully peruse the work.—Monmouth Beacon.

Every person connected, or who thinks of connecting himself with mining speculations, should possess himself of this book.—North Wales Chronicle.

A very valuable book in Cornwall Gazette.

All who have invested, or intend to invest, in mines, should peruse this able work. We believe a mere useful publication, or one more to be depended on, cannot be found.—Plymouth Herald.

Mr. Murchison will be a safe and trustworthy guide, so far as British mines are concerned.—Bath Express.

It deserves the attention of every one who seeks profitable investment of his capital.—Brighton Examiner.

With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital.—Poole Herald.

To capitalists the work will prove very serviceable.—Birmingham Mercury.

# GLENFIELD PATENT STARCH,

USED IN THE ROYAL LAUNDRY.

AND FURNISHED BY HER MAJESTY'S LAUNDRESS TO BE THE FINEST STARCH SHE EVER USED.

Sold by all chandlers, grocers, &c.

## AN ACT OF GRATITUDE.

FIVE THOUSAND COPIES of a Medical Book for Gratuitous Circulation.

GEORGE THOMAS, Esq., having been EFFECTUALLY CURED of a NERVOUS DEBILITY, LOSS OF MEMORY, and DIMNESS OF SIGHT, resulting from the early errors of youth, by following the instructions given in a medical work by a physician, he considers it his duty, in gratitude to the author, and for the benefit of nervous sufferers, to publish the means used. He will, therefore, send free, to any address, in a sealed envelope, on receipt of a directed envelope enclosing two stamps, to pre-pay postage, a copy of the medical work, containing every information required.—Address, G. THOMAS, Esq., Craven House, Newcastle-upon-Tyne.

# HOLLOWAY'S OINTMENT AND PILLS.—INCREDIBLE CURE OF BAD LEGS

OF 17 YEARS' STANDING.—James Nash, Thatched Farm, three miles from Chatham, was afflicted for 17 years with inveterate sore legs; there were 15 wounds in them; he was in St. Thomas's and Guy's Hospitals nearly seven months. All the surgeons recommending that amputation was the only thing likely to save him—this was too great a mischief; therefore he commenced using Holloway's Ointment and Pills, which healed all the wounds in a short time, and restored him to perfect health.—Sold by all medicine vendors throughout the world, at Prof. Holloway's establishments, 244, Strand, London; and 50, Maiden-lane, New York; by A. Stamps, Constantinople; A. Guldley, Smyrna; and E. Muir, Malta.

## MINING IN IRELAND.

(FROM AN IRISH CORRESPONDENT.)

I alluded briefly in my sketch last week to some of the mines of copper and lead in the county of Cork, and if you will kindly favour me with a corner in the next Number of your valuable Journal, for a few more remarks on "Irish mines," I shall be much obliged. The peninsula of Meantarra, from Carrigrohane to the Sheep's Head, is about 30 miles in length, and divides the beautiful bays of Bantry and Dunmanus. Near Bantry there are several valuable lead mines, which, however, for reasons I stated last week, have never been worked but 6 or 8 fms. deep from surface. About four miles west of the lead mines, and on the south shore of Bantry Bay, where vessels of any tonnage can lay alongside, some valuable slate quarries have been partially opened, but which, from want of judicious management, have not been turned to profitable account. I have recently seen samples from these quarries exposed to every kind of test, and they were pronounced by some of the best authorities in England as being equal in texture, colour, and durability, to the best slate in England and Wales. A friend of mine is about to work these quarries on a large scale, and as they are so favourably situated, I have no doubt but he will realise an ample return upon the capital he invests.

If you proceed six or eight miles further west on the south shore of Bantry Bay you arrive at a place called Killohane, where I think there are to be found some of the best copper mines in Ireland. There are to be seen several east and west lodes and caunters, which are composed of gossan, quartz, mundle, and yellow copper ore. The Killohane Mountain rises from the shore of Bantry Bay to the height of 1200 ft., and as the lodes crop out in the cliffs, they can be worked by means of adit levels to a great extent without the aid of machinery. I often ask myself the question, Why is it that such valuable mineral properties are allowed to remain untouched? and why is it that the Englishmen will ransack the remotest corners of the globe in search of mineral wealth when they may find it at home, and when in 24 hours from London they may see for themselves how and in what manner their capital is being expended? Is the English capitalist afraid to trust his life or property in Ireland? Let the Incumbered Estates Commissioners answer the question. Let the English and Scotch gentlemen who have purchased properties in Ireland answer the question, and they will tell you that Ireland presents the grandest field for enterprise and the loss of investment of capital of any other country in the world; and, to make use of an "Ulsterism," Old Ireland is a new country.

The extreme point of the peninsula of Meantarra, which juts out into the Atlantic, is known as the Sheep's Head. Near this spot, I remember some years ago to have seen an attempt made to work a copper mine; it is a very wild and romantic spot. An adit level was driven inland from the base of the cliff to intersect the lode, and in a short time 90 tons of copper ore were raised and sold, but the famine in Ireland of 1846 put an end, for the time, to every kind of enterprise. The mine in question was abandoned, and has ever since remained idle. Why will people go to Spain, Portugal, South America, California, and other places, in search of mines, when they may find them at home?

If you take a boat from Sheep's Head, and pull across Bantry Bay (and a delightful trip it is), to Castletown, Berehaven, and then cross the mountain ridge, you descend to the Berehaven Copper Mine, which is situated on the south shore of Kenmare Bay; but having alluded to this celebrated mine last week, we will now proceed a little further east, by the side of this beautiful bay, and we soon reach the Kenmare, or "Roughly Valley." In this valley we find a channel of oceanic limestone, which varies in breadth from a ½ to 1 mile, and extends in length about 10 miles. In this limestone formation several valuable silver-lead mines have been found, and a short time ago I was shown a spot where the lode crops out at surface, which is over 4 feet wide, and contains fine gossan, blende, carbonate of lime, and large lumps of solid silver-lead ore. In and near the junction of the clay-slates and limestone are found some good copper mines, in reference to which I think I cannot do better than copy the following remarks from a pamphlet recently published on this interesting valley, by the Rev. S. Houghton, Professor of Geology in the University of Trinity College, Dublin:—"The principal ones hitherto discovered in the Kenmare Valley, and none of them have yet been worked on a scale sufficient to develop their resources. Of these lodes, four are copper and three lead; the copper occurring two at the northern and two at the southern junctions of the lower carboniferous limestone with the underlying slates; the lead lodes are confined exclusively to the limestone, while the copper lodes occur in the underlying calcareous slates. It is worthy of remark in speculating on the position of these copper lodes, that they occur in the same geological position as some of the best lodes in Ireland; for instance, the Gossan Mine, at Silver Mines, and Berehaven Mine, in the county of Cork; which latter mine may, in fact, be considered as occurring in part of the same valley."

## LADY BERTHA MINING COMPANY.

The general meeting of shareholders was held at the offices of the company, Great St. Helen's, on Monday, Mr. J. F. WILLIAMS in the chair.

Mr. LIVINGSTON (the secretary) read the notice convening the meeting, and a statement of accounts, from which the subjoined is condensed:—

Total receipts and expenditure, 12551. 5s. 8d.—Mine cost, June, July, and Aug. 6001. 14s. 2d.; merchants' bills, &c., 5171. 12s. 6d.; leaving balance at banker's, 10531. 19s. 6d. In the account of assets and liabilities, the accounts showed—Estimated cost for the next three months, 6001. 14s. 2d.; damages, &c., 2461. 7s.—Cash at banker's, 1061. 19s.; arrears of call, 1061. 11s. 6d.; due for carriage, 221. 14s. 11d.; copper ore sold, 1501. leaving balance against adventurers, 4251. 1s. 7d.

Capt. MITCHELL then read the following as his report on the mine, as prepared for the general meeting:—

Oct. 2.—Moyle's engine-shaft is sunk to a 30 fm. level in killas, and to the south of the lode, which is occasioned by the lode taking a northerly dip about 20°. I may here remark, in this district the lodes generally turn out very productive when they make such turns. A cross-cut is driven towards the lode at the 30 to 40 feet, in which we have small branches of ore; the ground in the present end is very congenial for copper, being composed of white killas, with pryan joints, and a little spar, there is also a little water oozing from the end; driving by six men, at 101. per fm., the road for the drawing-machine, dividing, and casing is completed to the 30. The 20 has been driven west since last meeting 5 fms. 3 in. 6 in., making a total distance from shaft 38 fms. 1 ft.; the lode has much improved since that time, and produced for a short distance 1 and 3 tons per fm. The end now is exceedingly kindly, producing good stones of ore, with mundle, quartz, and peach. We have from 40 to 50 fathoms more to drive before we reach the western boundary; driving by four men, at 61. per fm. The eastern end in the 20 has been driven east of Moyle's shaft 5 fms. 0 in. 3 in.; total distance from shaft 26 fms.; the lode in this end has been very much disordered, but I am happy to say is now becoming more compact, and is composed of capel, quartz, peach, mundle, and spots of ore; driving by four men, at 81. per fathom. Jenkins's mine, in the bottom of the 20, west of Moyle's shaft, has been driven 5 fms. 3 in.; the lode throughout the sinking has been small and unproductive; sinking by four men, at 81. per fathom. There are two pitches working in the back of the 20 at tributaries of 10s. 6d. and 12s. in 17, worth on an average 1½ and 1 ton per fm. The capitan and shears are erected, and all things attached thereto. The machinery is in excellent working order; in fact, we have every facility to carry the mine to a considerable depth. In conclusion, I beg to say that the chances for a good mine are very encouraging, and the following work I should recommend to be carried out:—To drive the cross-cut north in the 20 and see the lode at this point; also to force on the 30 cut and west, and sink another mine further west when the present line is down, which we can do in a lode worth about 2 tons per fm. I think this quite sufficient until a further discovery be made.

Mr. LELAND, in moving the adoption of the report and accounts, stated that he had visited the mine, and taken much trouble to ascertain its real position; and he was satisfied that it was as good a mine as could be found in the neighbourhood.

Capt. MITCHELL exhibited several specimens of the ore, and in answer to a question, said he hoped to intersect the lode in two or three weeks.

The report and accounts were then unanimously adopted.

Mr. LELAND proposed that a call of 1s. 6d. per share be made; the estimated balance against the mine for the next three months would be 4251. 1s. 7d. At the meeting held, we have reason to expect it will continue for 140 fms. in length, and as high as the 190, or it may be up to the 170, as both of these levels are considerably westward of the 205, where we are now driving northward. This is quite a new and favourable feature in the mine, and should the same occur at the 215 (which we see no reason to doubt), we shall have a most productive and lasting mine. The reserves in the back of this level are now considerable, as compared with what we have hitherto had; we are now laying open good ore ground northward, whereas we have for some years past driven southward only. At the 215 we have a fine strong lode, yielding 10 cwts. of ore per fm.; the end is now exactly under the point at which the lode was lost in the level above, and should the lode continue as at present for a few fms. more, it will, we think, prove that the 205 was formerly driven on a wrong part of the lode, and if so, we may expect to have a long run of ore ground before us. The prospects at the two lowest levels having so greatly improved, we have commenced sinking below the 215, and are now down 3 fms. The lode in the shaft is small and poor, the same as it has been from the 160 downwards, the shoot of ore being about 30 fms. south of the shaft. We have suspended driving at the 190, as the lode is poor, and the end

## TAMAR SILVER-LEAD MINING COMPANY.

The annual general meeting of proprietors was held at the offices of the company, on Monday, Mr. W. J. DUNSTON in the chair.

Mr. GEORGE (the secretary) read the notice convening the meeting, and the minutes of the last, which were confirmed.

A statement of accounts was exhibited, from which the subjoined is condensed:—

Balance last audit..... £435 7 10  
Cost, six months, to August..... 5531 17 9  
Discount..... 42 1 9  
Directors' attendance, half-year, to Aug. 50 0 0 = £6059 7 4  
Ores sold..... 5141 0 10

Leaving balance against adventurers..... £218 6 6

The following report was then read:—

Oct. 3.—I beg to furnish you with the following report on the state and prospects of this mine. Since the last meeting, the lode at the 205 has greatly improved, and there is every probability of a continuous course of ore for many fms. in length southward. We have also a good lode 15 fms. east of the old level, on which we are driving north, and we have reason to expect it will continue for 140 fms. in length, and as high as the 190, or it may be up to the 170, as both of these levels are considerably westward of the 205, where we are now driving northward. This is quite a new and favourable feature in the mine, and should the same occur at the 215 (which we see no reason to doubt), we shall have a most productive and lasting mine. The reserves in the back of this level are now considerable, as compared with what we have hitherto had; we are now laying open good ore ground northward, whereas we have for some years past driven southward only. At the 215 we have a fine strong lode, yielding 10 cwts. of ore per fm.; the end is now exactly under the point at which the lode was lost in the level above, and should the lode continue as at present for a few fms. more, it will, we think, prove that the 205 was formerly driven on a wrong part of the lode, and if so, we may expect to have a long run of ore ground before us. The prospects at the two lowest levels having so greatly improved, we have commenced sinking below the 215, and are now down 3 fms. The lode in the shaft is small and poor, the same as it has been from the 160 downwards, the shoot of ore being about 30 fms. south of the shaft. We have suspended driving at the 190, as the lode is poor, and the end

\* I have just been informed that the royalty of this property, extending over 4000 acres, has been purchased by a worthy and influential party in London.

within a few fms. of the boundary. The operations during the past quarter consist of preparations for and sinking of the engine-shaft, driving south at the 215, and north at the 205, putting in a new drawing lift at the bottom level, new plunger bottom complete at the 205, new plunger lift complete with the exception of top door-piece at the 125, new balance hoist complete at the 115, new top door-piece at the 90, and new plunger lift complete, with exception of top door-piece, at the 55 fm. level. The pitwork is, therefore, now in a sound efficient state, and the only work of importance that remains to be done is the putting in the new condensing work (on the mine), and which we propose doing before the winter sets in. We shall have to stop our engine for this purpose, and it will somewhat interfere with our drawing and dressing.

The only inconvenience, however, will be a delay of a few days in the next sampling but one. The late increase of 10 tons per month will be maintained for two or three months longer, after which, when the 205 end is further extended, we hope to make an additional 5 or 10 tons per month; our reserves will, at the same time, be augmenting, and the mine consequently become in a more sound and healthy state than for some years past. The present returns will leave some profit, and when the new work recently required shall be paid for the cost will be less, and the profit increase to the same extent. We do not anticipate making any particular alteration in the underground labour cost, the reduction will be in the bill for materials, principally in coals and timber. We have completely succeeded in our endeavours to supersede the use of whim rope, which used to cost at least 1000. per month, we now make our own chain, and have not had a single breakage with it. The engine-shaft is being sunk by eight men, at 231. per fm. The 215 is extending southward, and the lode in the end is 5 ft. wide, and worth ½ ton of ore per fm., and likely to improve. We are also driving north on the western lode, which is worth 6 cwts. of ore per fm. There are three stops in the back of this level, worth on an average 8 cwts. of ore per fm. The lode in the south end at the 205 is yielding 35 cwts. per fm., and in the north end 10 cwts. The stops in the back of this level are worth as follows:—No. 1, 31 cwts.; No. 2, 13 cwts.; No. 3, 7 cwts.; No. 4, 8 cwts.; No. 5, 7 cwts.; and No. 6, 8 cwts. of ore per fm. There are two stops in the back of this level, one being worth 7 cwts., and the other 8 cwts. of ore per fm.—JAMES WOLFE-STAN, THOMAS FOOT.

The CHAIRMAN said, the report was so elaborate, and he considered so excellent, that he had very little to add to it. They could now see their way quite clear to make a monthly profit, and pay the balance against the mine without making a call, as they had taken a turn, and in a short time would rub off the debt. They had been waiting and working for the run of ore ground, and should not have sunk under the 205 if they had not seen their way clear. It was rather singular that they should get such a bad price for their ore, as the assays were from 161. to 171.

Mr. JONES said, they had more ore in reserve than for some years past. The CHAIRMAN was glad to say that was the fact. The report and accounts were then unanimously adopted, and a vote of thanks to the Chairman terminated the proceedings.

## CORNISH MINE PHOTOGRAPHS—No. XVI.

### "THE TRIUMPH."

Pride is a principle of our nature, that either becomes a vice or a virtue in its possessor, according to the cultivation it receives. If it be allowed to grow unchecked, it bears the evil of vanity, but by proper restraint it blossoms with the cardinal virtue of self-confidence; the one prompts to heroic deeds and great accomplishments, the other to egotism and egotistic follies. A remarkable instance of the just application of this principle lately fell under our notice, on a visit to the Copper Ticketing held at Pool, on Thursday, Oct. 1 inst., where a "triumph" was achieved, by the captain of West Seton Mine filling the chair on that occasion for the first time. True, he was a proud man, and had the manliness to acknowledge it; in doing so, he enunciated so many truths and most excellent mining maxims, that we think a "Photograph" of the entire meeting will be appropriate to our series.

It will be unnecessary to say more of the ticketing than that it is a meeting at which the parcels of ore from the mines are tendered for by ticket, the agents of the smelting and mining companies being present. A large amount of business is transacted, generally about 25,000. After the business of the day, a splendid dinner is enjoyed by the parties in attendance, wholly composed of the agents of the companies, invited guests, and "strangers," by which term is understood gentlemen non-resident in the counties of Devon and Cornwall, who are always welcome. The representative of the mine selling the largest quantity of ore takes the chair; as such is a good reason for rejoicing at any time, the mine first doing so is generally hailed with acclamation, and "heading the list" is complimented by a present from the adventurers of a round or two of champagne, which on this occasion was liberally afforded by West Seton; well could they afford it, their parcel of ore being 592 tons, and the amount realised 38061. 2s. 6d. Being in the neighbourhood on a tour of mine inspection, we received a polite invitation, which we, of course, accepted. After the conclusion of the business of the day, and the cloth being drawn, about 30 or 40 gentlemen being present, including two strangers, besides ourselves, the prospects of the various mining interests, the prices for copper and tin ores, the improvements in machinery, the various modes of dressing, the dues of landlords, &c., were freely discussed, as well as a handsome dessert and ample supply of wine, under the influences of which, and the presence of so much ability, a conversation mutually beneficial and instructive was enjoyed by all for two or three hours. These meetings taking place almost weekly by the agents of the different districts (for all mines are not able to sell ore regularly every month), creates an interchange of good feeling and ideas, of the highest importance to the welfare of mining. We were really delighted to be recognised, even at this western ticketing, by "east country captains." This fusion of districts must and does tend to good.

After the loyal toasts, "Lords of mines," "Fish, tin, and copper," came "Success to West Seton." The Chairman then rose and recorded a series of facts it is the object of our paper to record, for the benefit of wavering, timid shareholders, therefore for mining generally. He commenced by saying he felt proud that day, for he had achieved a "triumph," the object of his hope's fondest aspirations; that was, not for himself, but for his mine, on the adventurers' account, to be placed in so honourable a position as to occupy that chair, and be at the "head of the list." He could assure them it had not been achieved but by long and anxious perseverance, and a determination to overcome all difficulties, by which they had triumphed. They had been upwards of 14 years in accomplishing it, but having at last reached the goal of their desires, he must acknowledge, even to himself, they and he had reasons to be proud. He said they individually afforded instruction to adventurers who were not at once prosperous not to despair; had they done so in their earlier day, during their period of trial (for such they had), their splendid mine, now at the head of the list, would have been lost to them; that they by perseverance were now in a position to repay all anxieties, and to fulfil their most sanguine expectations. Mining, he thought, had been improperly represented, by parties holding out hopes of immediate returns which were seldom if ever verified; but if perseverance such as they had in them were carried out, disappointment seldom occurred. He quoted a few statistics of that day's proceedings, which he thought would be of some value, if generally known; they had that day sold 3935 tons of copper ore, the produce of 23 mines, for the sum of 25,033. 14s., out of which no less than 12,000. to 14,000. would go as profit into the hands of the adventurers, a result which he thought was a convincing proof that mining was undoubtedly of vast importance to the community, particularly to the districts in which the metals are found, which are usually bleak and otherwise valueless. He felt perfectly convinced in his own mind that mining, if properly and honestly conducted, was and is one of the most lucrative and attractive pursuits of this great country; but it could only be by perseverance and the outlay of capital they could ever hope to fill that chair, and achieve a "triumph," which he hoped they would all by-and-by enjoy, as they had.

"Better prices, and a better standard," and numerous others toasts, having been honoured and replied to by gentlemen present, that of "Strangers" was cordially received; on which they stated their thorough appreciation of the compliment. Having been over some of the mines during the last few days, they could not resist the temptation of being present to witness the most pleasing termination of the routine of mining procedure—the sale of the ores, and the meeting of so many gentlemen of such sterling worth and ability. They could assure them they should leave Cornwall with very different impressions of its mines and miners than they had previously entertained; everywhere they had witnessed the utmost attention from the lowest individual employed, and had admired some most astonishing efforts of human ingenuity and industry,—they had seen everything to admire and nothing to condemn. That the observation of the Chairman was just—without perseverance nothing could be successful. They thanked all present, but more particularly the Chairman, for his valuable and excellent speech, and to assure them, though they had travelled thousands of miles, and only just returned from Australia, they had seen nothing to give them more sincere pleasure than their visit to Cornwall and its mines. We should not omit to state, that we felt pride on being recognised as the author of these papers, which were stated to have afforded much gratification and amusement to the readers of the Mining Journal,—that they were calculated to do, and had done, much good, by representing Cornish character and ability as they existed; and was requested to continue the series, which would undoubtedly still further assist in the great work. We expressed our thanks, on behalf of the proprietors of the Mining Journal, assuring the company it was their anxious wish to do



all in their power to forward mining interests, by disseminating truths and facts as they could obtain them. That as these papers appeared so welcome, and were so much approved, they should be continued, and that that day's proceedings, we thought, would make a capital subject for a Photograph, to be called the "Triumph," which had that day been so gracefully acknowledged and displayed by the Chairman.

Now, oh, reader! this matter was not done in the dark; open day was the means by which the picture was transferred and secured. Such is a faithful representation of a Ticketing, and the characters attending it. There is, indeed, much that, as the "strangers" said, was "just" in the Chairman's remarks, and so is there much to be gleaned from them, when they say, on witnessing Cornishmen and mines as they really exist, they arrive at very different to preconceived opinions. As it is impossible all can visit Cornwall to see for themselves, the object of these papers is to give faithful transcripts to obtain the same desirable end, which, if we accomplish, we shall feel a just pride, and confess to ourselves that we, too, have achieved a "triumph."

## REVIEW OF BRITISH MINING FOR THE QUARTER ENDING SEPTEMBER 30, 1857.

BY J. H. MURCHISON, ESQ., F.G.S., F.S.S.

At the commencement of the past quarter, the downward tendency of the metals produced a discouraging feeling with respect to mining property; while this cause was but temporary, the dearth of money and the general flatness of business usual during the autumn months counteracted that favourable reaction which might otherwise have been reasonably expected. It may be noticed also that when the prices of copper and tin ores fell considerably a few months ago, some of the principal companies kept back their supplies, which, of course, still further diminished the profits for a time. During the quarter the dividends paid have amounted to 108,690*l.*, against 122,173*l.* in the previous quarter, and 110,472*l.* in the corresponding quarter of 1856. In the first nine months of 1857 the total dividends paid amount to 360,837*l.*, against 333,564*l.* in the first nine months of 1856, being an increase of 27,273*l.*

At the sale of copper ores in Cornwall on July 2, the average produce was 6*½* cwt., and the price per ton 5*l.* 17*½* s., or 17*½* d. per unit; on July 30, the same produce realised 6*l.* 4*½* s. 6d. per ton, or 18*½* d. per unit; and on Aug. 27 it rose to 6*l.* 17*½* s. 6d. per ton, or 17*½* d. per unit, being a rise of 1*l.* 0*½* s. 6d. per ton of ore in two months. On Sept. 10, one of the produce of 6*½* cwt. realised 6*l.* 17*½* s. 6d. per ton, or 17*½* d. per unit, since which the price has fallen a little; on Sept. 24, 6*½* cwt. produce fetching 6*l.* 12*½* s. 6d. per ton, or 17*½* d. per unit. The average price per unit for the quarter has been 19*½* d., against 19*½* d. in the previous quarter, and 17*½* d. in the corresponding quarter of 1856. Copper has been raised since last review from 117*½* to 124*½* s., which was then anticipated by the writer.

The following are particulars of the sales of copper ores in Cornwall:—

Quar. ending—	Tons.	Av. Prod.	Amount.	Av. price.	Fine cop.
Sept. 30, 1857	45,676	0-410	£287,792 5 6	5 6 0	2941 11
June 30, 1857	30,972	0-258	311,817 2 6	6 2 4	3188 7
Mar. 31, 1857	40,755	0-324	349,124 12 6	7 0 4	3152 17
Sept. 30, 1856	49,636	0-976	290,278 18 0	6 0 7	3455 18
June 30, 1856	54,273	0-311	308,633 18 0	5 13 8	3497 13
Mar. 31, 1856	53,934	0-202	317,837 17 6	5 17 8	3538 9

These figures show that in the past quarter the quantity of ore has decreased 5296 tons under the previous quarter, and 8960 tons under the corresponding quarter of 1856. The average produce has increased 0.158 over the previous quarter, and decreased 0.560 under 1856; the amount has decreased 24,064*l.* 17*½* s. under the previous quarter, and 11,491*l.* 10*½* s. under 1856; the average price per ton has increased 3*½* s. 6d. over the previous quarter, and 5*½* s. 6d. over 1856; and the quantity of fine copper has decreased 246 tons 16 cwt. under the previous quarter, and 514 tons 7 cwt. under 1856.

It seems, therefore, that there is a falling off in the quantity of ore sent to market, which has, no doubt, been in a great measure owing to some of the principal mines lessening their supplies, while the price received was low; still, it will be observed that while the average produce, or richness, of the ore is more than  $\frac{1}{2}$  per cent. lower than that of the corresponding quarter of 1856, the average price per ton is 5*½* s. 6d. higher. The quantity of fine copper naturally shows a considerable diminution.

The following are the totals and averages for the nine months of 1857 and 1856 respectively:—

Nine months of	Tons.	Av. Prod.	Amount.	Av. price.	Fine cop.
1857	146,403	0-329	£295,754 0 6	5 9 7	9282 15
1856	157,943	0-483	£252,236 11 6	5 17 2	10242 0
Increase, 1857	11,440	0-154	£43,518 9 0	12 5	959 5

From this it appears that, in the past nine months, the mines of Cornwall and Devon have supplied about 100,000*l.* worth of copper less than in the corresponding period of 1856; while it may be stated that the first nine months of 1856 yielded about the same amount more than in the corresponding period of 1855.

The sales of Irish and English copper ores at Swansea, for the nine months of 1857 and 1856, have been as follows:—

First nine months of	Tons.	Amount.
1857—Irish	6644	£76,786 13 0
1856—ditto	9393	90,399 18 6
1857—English	141	1,772 0 6
1856—ditto	234	1,446 17 6

In last Review, the writer referred to the Board of Trade Returns for the first five months of the year, showing that they gave no indication of the necessity for a material fall in the price of copper, and he can now quote the Returns for the month and eight months ending Aug. 31 last with still more satisfaction. The exportations of British and Irish produce have been as follows:—

Month ending—	Tons.	Eight months ending—	Tons.
Aug. 31, 1857	2790	Aug. 31, 1857	15,949
1856	1743	1856	13,878
1855	1090	1855	10,291

The principal increase has been to the British East Indies and the United States. The importations of this metal have been:—

Month ending—	Tons.	Eight months ending—	Tons.
Aug. 31, 1857	7736	Aug. 31, 1857	58,709
1856	7489	1856	50,363
1855	7068	1855	35,816

There has been a considerable increase from Spain, Chili, and Australia, while from Cuba there has been a decrease. Against this has to be noticed the exportations of Foreign and Colonial Copper, as follows:—

Month ending—	Tons.	Eight months ending—	Tons.
Aug. 31, 1857	210	Aug. 31, 1857	1363
1856	82	1856	995
1855	—	1855	609

Showing, therefore, that, although there has been a considerable increase in the importation of foreign ores, there has been at least a proportionate increase in the exportation of foreign copper, and when the large decrease in the supply of copper from the mines of Cornwall and Devon is taken into consideration, it must be said that there are the strongest grounds for expecting the price of this metal being fully maintained.

The price of lead has remained at a good price during the quarter, and the exportations also show a satisfactory increase for the first eight months of the year:—

Month ending—	Tons.	Eight months ending—	Tons.
Aug. 31, 1857	210	Aug. 31, 1857	22,363
1856	2349	1856	18,148
1855	2346	1855	19,727

The importations of Lead have been:—

Month ending—	Tons.	Eight months ending—	Tons.
Aug. 31, 1857	1147	Aug. 31, 1857	7020
1856	1472	1856	5725
1855	216	1855	4594

During 1856, and the early part of this year, tin rose to an unusually high price, which enabled mines of that metal to give results more favourable than they would otherwise have done. In 1856, at least eight tin mines paid dividends which had not done so in 1855, and others were enabled to meet their expenditure which could not have done so under the

ordinary prices. About three months ago a reduction in price took place, the effect of which soon made its appearance in the accounts of several concerns, but the sales of Banca tin having gone off at increased rates caused an immediate reaction, which has since been maintained. The exportations of tin have been:—

Month ending—	Tons.	Eight months ending—	Tons.
Aug. 31, 1857	276	Aug. 31, 1857	1537
1856	166	1856	1134
1855	162	1855	959

Month ending—	Declared value.	Eight months ending—	Declared value.
Aug. 31, 1857	£160,476	Aug. 31, 1857	£1,108,036
1856	114,125	1856	921,671
1855	108,018	1855	742,970

The importations have been:—

Month ending—	Tons.	Eight months ending—	Tons.
Aug. 31, 1857	180	Aug. 31, 1857	1237
1856	77	1856	1514
1855	81	1855	1071

The exportations of Foreign and Colonial Tin have been:—

Month ending—	Tons.	Eight months ending—	Tons.
Aug. 31, 1857	47	Aug. 31, 1857	273
1856	3	1856	81
1855	43	1855	207

The accompanying table shows that in the past quarter the sum of 108,690*l.* has been divided, and 360,837*l.* in the first nine months of the year. The latter may be thus analysed:—

English mines	£309,557 0 0
Irish mines	29,125 0 0
Welsh mines	11,195 0 0
Isle of Man	10,990 0 0
<b>Total</b>	<b>£360,837 0 0</b>
Copper	£249,024 0 0
Lead	49,482 0 0
Copper and tin	34,404 0 0
Tin	27,927 0 0
<b>Total</b>	<b>£360,837 0 0</b>

During the quarter Herodfoot, Rhoswydol, and Sortridge Consols have resumed dividends, and Craddock Moor and East Falmouth have paid for the first time—making, with Collocombe, Great South Tolgus, Grambler and St. Aubyn, St. Day United, and Wendron Consols, seven mines which have entered the Dividend List this year up to the present time. Some more of the progressive mines are approaching a dividend state—an investment in which at present would, no doubt, pay well in a comparatively short time.

For some years past, it has been remarked that more business has been done in mine shares in the last quarter of the year than in any other; and there are signs of this being the case in the present year, at the end of which the writer hopes and expects to show results even more satisfactory than those of 1856:—

## DIVIDENDS PAID BY BRITISH AND IRISH MINES IN THE QUARTER AND NINE MONTHS ENDING SEPTEMBER 30, 1857.

No. of Share.	Name of Mine.	Div. paid in six months ending June 30, 1857.	Div. paid in three months ending Sept. 30, 1857.	Total div. paid in 9 months ending Sept. 30, 1857.
5120	Alfred Consols	£1 13 0	£2448	£2561
4000	Bodford United	0 13 0	2400	2533
200	Boscawen	20 0 0	4000	4020
240	Boscawen	6 0 0	1440	1500
1200	Brightside	0 2 0	120	1320
1000	Carn Brea	4 0 0	4000	4000
3000	Collocombe	1 0 0	2000	3000
256	Condarrow	10 0 0	2560	2660
1055	Craddock Moor	—	0 5 0	264
128	Croymystwith	10 0 0	1280	1380
1024	Davon Great Consols	40 0 0	4096	4136
12800	East Falmouth	0 2 6	1600	1626
179	Dolcoath	20 0 0	3580	3600
280	Dorwent	10 0 0	2800	2810
672	Ding Dong	1 0 0	672	672
2013	East Falmouth	—	0 2 6	256
1400	Eyan	3 0 0	4200	4500
8700	Exmouth and Adams	0 5 0	1425	1975
300	East Daren	9 0 0	900	900
4940	Fowey Consols	15 0 0	1920	3420
2560	Foxdale (Isle of Man)	0 6 0	1452	1512
243	Grambler & St. Aubyn	2 10 0	6400	6600
119	Great Work	2 0 0	486	506
6000	Great South Tolgus	7 10 0	892	902
1024	Herodfoot	0 4 0	1200	1240
1000	Holyford	0 5 0	500	550
160	Levant	6 0 0	960	1020
20	Lisburne	100 0 0	2000	2100
400	Lisburne	9 0 0	3600	3690
1024	Mary Ann	4 5 0	4352	4802
5000	Mendip Hills	0 5 0	1250	1300
20 000	Mining Co. of Ireland	0 10 0	10000	10100
6000	North Basset	1 15 0	10500	10650
6400	Par Consols	2 16 0	17320	17580
200	Phoenix	20 0 0	4000	4020
1000	Provident	3 1 0	3087	3090
560	Provident	5 0 0	2800	2805
2500	Rhoswydol	—	0 3 0	375
512	Rosewarne United	3 10 0	1792	1802
20000	St. Day United	0 1 6	1500	1516
94	St. Ives Consols	15 0 0	1410	1425
12000	Sortridge Consols	—	0 2 6	1500
496	South Wheal Frances	30 0 0	14880	15180
256	South Caradon	8 0 0	7680	7760
6000	South Tolgus	8 0 0	2048	2056
6000	Treowetha	0 10 0	3000	3010
4005	Treowetha	0 3 0	614	617
1040	Trelawny	0 15 0	780	795
20000	Val of Towy	0 6 0	500	506
6000	West Basset	1 7 6	11250	11426
256	West Caradon	1 10 0	1792	1902
256	West Daniel	4 0 0	1024	1028
400	West Providence	21 0 0	8400	8610
512	Wendron Consols	1 0 0	512	513
512	Wheal Basset	24 0 0	12288	12312
256	Wheal Buller	17 10 0	4456	4626
256	Wheal Clifford	14 0 0	3500	3514
1024	Wheal Grylls	0 2 0	102	102
512	Wheal Jane (Kee)	2 10 0	1280	1290
1024	Wheal Kitty (Lelant)	1 15 0	1792	1807
448	Wheal Margaret (St. Ag.)	9 0 0	4032	4041
80	Wheal Owles	18 0 0	1440	1458
198	Wheal Seton	10 10 0	2079	2089
4005	Wheal Wrey	0 7 0	1438	1445
5000	Wicklow	0 12 6	3125	3137
	<b>Total</b>	<b>352147</b>	<b>108990</b>	<b>360837</b>

\* This includes 3125*l.* for the Wicklow Mines, omitted in last Review.

## DIVIDEND MINES.

ALFRED CONSOLS.—Various reports have been circulated respecting this mine, which have caused considerable fluctuations in the shares, to which this mine appears to be more subject than any other. In January, 1855, they were 17*½* s.; in May, the same year, 9*½* s.; in July, 31*½* s.; in August, 11*½* s.; in November, 23*½* s.; and in January, 1856, 17*½* s. Considering they are 5120 shares, these fluctuations are very great. In 1856, they varied from 14*½* to 19*½* s. In March, this year, they were 22*½* s.; in June, 17*½* s.; and since then they fell to 11*½* s., and are now about 13*½* s. In the past quarter, 1085 tons of copper ore have been sold for 7277*l.* 16*½* s. 6d., against 1410 tons for 8959*l.* 12*½* s. in the previous quarter, and 874 tons for 6890*l.* in the corresponding quarter of 1856. The dividends paid in the first nine months of this year amount to 10,490*l.*, or 4*½* s. per share, against 9632*l.*, or 2*½* s. per share in the first nine months of 1856. The total sum now paid is 90,368*l.*, or 17*½* s. per share.

BOTALACK continues to do well. Considerable sales of tin are made, and in the past quarter 317 tons of copper ore have been sold for 3764*l.* 5*½* s. against 223 tons for 2708*l.* 1*½* s. in the previous quarter, and 155 tons for 1574*l.* 14*½* s. in the corresponding quarter of 1856. The dividends paid in the first nine months of 1856 amount to 5000*l.*, or 2*½* s. per share, against 4000*l.*, or 20*½* s. per share, in the corresponding period of 1856. The total amount divided is about 32,000*l.*, or 410*½* s. per share. The shares are about 260*l.* to 270*l.* per 2000th share.

COLLOCOMBE has paid another dividend of 7*½* s. per 2000th share, making the whole sum paid this year 3700*l.* The fall in the standard affected the profits, but the mine is doing well. The shares are about 18*½* s. to 20*½* s., but few sellers.

CRADDOCK MOOR.—This mine was particularly referred to in the March Review, and a favourable report on it by Capt. Pascoe, of South Wheal Frances, was given. On the 11th of September the first dividend was paid—namely, 5*½* s. per 1055th share (256*l.*). The returns are gradually increasing, the two-monthly sale in Jan. having been 140 tons for 1490*l.*, and in September 198 tons for 1277*l.* 18*½* s. 6d. The different levels continue productive, and the prospects are good. The shares are about 40*l.* to 45*l.* per 1055th.

DEVON GREAT CONSOLS.—In the past quarter 6295 tons of copper ore have been sold for 36,178*l.* 8*½* s. 6d., against 6800 tons for 32,351*l.* 18*½* s. in the previous quarter, and 7016 tons for 37,638*l.* 1*½* s. in the corresponding quarter of 1856. In each case exclusive of carriage; 3080 tons have been sampled for September. There is

nothing particularly new at the mines. The dividends for the first nine months of the year amount to 60,416*l.*, or 59*½* s. per share, against 47,104*l.*, or 46*½* s. per share, in the first nine months of 1856. The whole sum now divided is 601,088*l.*, or 587*½* s. per share. The shares are quoted 400*l.* to 410*l.* per 1044th.

EAST DAREN continues to make good profits, and has divided 3600*l.* in the first nine months of this year, against 2100*l.* in the first nine months of 1856.

EXMOUTH AND ADAMS.—The eastern lode has just been cut in the 60, and is worth  $\frac{1}{2}$  ton of lead ore per fathom. The 40 north is producing 1 ton per fathom, the 30 north  $\frac{1}{2}$  ton, and the 30 south  $\frac{1}{2}$  ton. The 50, north and south, are very promising. The 10 north and south, are worth  $\frac{1}{2}$  ton per fathom. The pitches are yielding well, and the mine, which is again in full operation, never looked better. In the past quarter 2707*½* tons, or 9*½* s. 6d. per share, has been sold, against 160 tons for 2645*½* s. 6d. per share, for the first nine months of the year, against 3420*l.*, or 15*½* s. per share, in the first nine months of 1856.

FOXDALE.—At the annual meeting, held in August, it was stated that the profits on the year's working amounted to 11,037*l.* Since then an important discovery has taken place in the 117, west of Beckwith's Mine. In the first nine months of this year 8060*l.*, or 31*½* s. per share, has been divided, against



## Original Correspondence.

## THE CAUSE OF ANIMAL HEAT, &amp;c.

Sir,—It is doubtless beyond dispute that caloric, in the various functions it assumes, is a primary agent in the mechanism of the universe, and that the engineering and mining skill of man, without its aid, could never have been brought into existence. It is, therefore, of the greatest importance that the chemist, the astronomer, the geologist, the physician, the natural philosopher, the miner, the agriculturist, and the engineer—as far as attainable,—have correct views of the various functions which caloric performs in nature as well as in art. The subject of this letter may, therefore, not be uninteresting to the readers of the *Mining Journal*; more especially as it is demonstrable, and capable of being shown to be exceedingly simple and beautiful.

It is unnecessary that I should enter into a disquisition of the subject of the absorption of the oxygen of the atmosphere into the blood, or of the chemical affinities constantly going on in the animal frame. These subjects are already pretty well understood, without any additional elucidation being required from me.

The true cause of animal heat appears to me to be clearly owing to the reduction of volume of the oxygen of the atmosphere from the gaseous to the liquid state, as it comes in contact with the blood in its passage through the lungs.

The following experiment will satisfactorily explain why a large amount of caloric must necessarily be forced from gaseous matter when such matter is compressed in volume, and why it, therefore, manifests itself by an evolution of sensible heat:—

Take a hollow cylinder, somewhat like the common syringe, of some bad conductor of heat—of wood or of thick glass—but with this difference, that, instead of one end having an orifice for the ejection of liquid, it must be perfectly closed; it must have a piston like the syringe, also a bad conductor of heat, and which must be made to move in the cylinder perfectly air-tight. Place a bit of tinder, prepared from a linen rag, in the cylinder, then place the piston at the cylinder's mouth, and with a sudden and powerful thrust condense the air in the cylinder: the tinder may thus be made to ignite. It is thus made to appear clear that, by forcing the particles of atmospheric air into closer proximity, the contained caloric will also be condensed, and will, therefore, have a powerful tendency to radiate into the surrounding colder space, to gain an equilibrium of heat.

We may thus reason, *a priori*, that all gaseous substances, even carbonic acid gas, which extinguishes flame, must necessarily give out heat when condensed. Oxygen gas is undoubtedly condensed in volume many hundreds of times when it assumes the liquid state, by combining with the blood in the lungs; and it must necessarily part with a very large amount of caloric which it held in solution in the gaseous state. We have thus a clear and tangible proof of the cause of animal heat.

It is well known that the product after combustion of our common gas lights is water. Hence, upon the same simple yet beautiful principle the oxygen and hydrogen gases are undoubtedly condensed in volume many hundred times, and that they must, therefore, necessarily part with a large amount of caloric, which they are no longer able to hold in solution in their condensed state as in water; the evolved caloric, therefore, manifests itself by light and heat. If this subject be minutely and unprejudicially examined in all its bearings, it must appear manifest that caloric cannot be philosophically viewed in any other light than that of fluid matter.

Another subject naturally arises out of the forcible thrust alluded to, which was made to compress the air in the cylinder. It will, undoubtedly, appear quite clear that the amount of heat generated by the force exerted to compress the air is exactly equivalent to the force required to bring the air to its original rarity and temperature. Hence, the truth of the theory—if I understand it rightly—of the conservation of force.

Suppose a cubical foot of water to be converted by heat into steam, it is evident that to bring the steam into its original state of water, at its original temperature, it must give out either in a state of heat, or that of electricity, the exact amount of caloric which was employed to convert the water into steam. That caloric in a state of heat is convertible into electricity I have before shown, both in the *Mechanics Magazine*, as well as in the *Engineer*; difference of temperature being the principal *modus operandi* of conversion.

As animal heat is thus clearly shown to be principally generated by the condensation of the oxygen gas of the atmosphere, it is very natural to assume that the arterial blood, flowing from the lungs, must have a higher degree of temperature than venous blood, or blood flowing through the more remote parts of the body. I long entertained this idea, before I saw anything positive on the subject. I saw, however, about three or four years ago, the *Manuel de Physiologie*, by J. P. Boullaz, in which, at page 109, where speaking of the chemical and physical properties of arterial blood, he states that it has a higher temperature, of from one to two degrees.

From my theory of the cause of gravitation induced by difference of temperature, I was very naturally led to believe that the difference of temperature above alluded to in the animal frame would cause the caloric, in its tendency, to gain an equilibrium of heat, to assume its electrical functions, and which would, therefore, constantly form the necessary supply of electricity for the nervous system.

W. M. STEVENSON.

Midland-road, Derby, Oct. 3.

## ON EDUCATING THE WORKING CLASSES.

Sir,—Many have been the suggestions made of late as to the best means of satisfying that want, now beginning to be so universally felt—the want of education among the working classes, and perhaps we may say, among our working colliers and miners especially. The importance of the subject cannot well be over-rated; it is one in which the interests of not only the parties immediately concerned are involved, but also those of every educated man throughout the kingdom, from the aristocrat not at all connected with commerce, to the clerk toiling at the desk of the merchant and mine proprietor. If amidst the progress of the present age so important a section of society as our working men be allowed to lag behind in all the ignorance and superstition of their forefathers, we shall find, when rather late, that our culpable apathy in this respect will carry with it its reward, and that progress with so heavy a load upon our shoulders will be impossible.

It is, therefore, not only the duty but greatly the interest of every one to aid in the work, and let no one neglect to give that assistance, however little it may be, which lies in his power. The work to be done is in truth great, and to ensure success demands all that the earnest and unwearied exertions of every person who has the welfare of his country and of mankind at large at heart can accomplish. Done it must be, and the sooner the first step is taken towards the setting on foot a comprehensive plan of education, to secure to each child such an amount of instruction as will be a groundwork for future teaching, the better. Till this is done we may establish mechanics and other literary institutions in vain. We have been a long time before we could get ourselves to acknowledge that nearly all the institutions established for our workmen have, in a great measure, been failures. It is now, however, a fact generally allowed, and although I am far from wishing to discourage any efforts which are still being made in that direction, yet I fear that, with some few exceptions (men grown up in ignorance are with difficulty taught), success will be very limited. Our true sphere of action lies among the rising generation, among the children of our working men. Let us see that they are now, when capable of it, so moulded that they will be able to receive and appreciate the means of improvement which will be so largely placed at their disposal. If this be done it will be seen that our present unsuccessful institutions will be not only not unsuccessful but inadequate to the wants of the people. We cannot expect institutions for the working man, in the establishment of which he could neither take part nor interest, to attain any success. Let us, then, prepare the child for his work as a man. A great deal has doubtless been done in this direction. The liberality of private individuals, and the partial help rendered by Government, have, no doubt, succeeded in raising the standard of education. In fact we now meet with few manufactories of any importance without their school or schools.

But while we do justice to the good done, and being done by those means, yet all persons who study well the subject must, I think, feel convinced that unless another step be taken to complete the work so auspiciously begun, the rising generation of workmen will not be so much in advance of the present as the requirements of their age will demand: there will still be a great gap between them and the class above. Now, notwithstanding the great cry raised by narrow-minded snobism against the intervention of Government in national education, I cannot but think it is a task which comes eminently within its sphere, and that for measures to complete the present system we must look to it. The present system is, with some exceptions, good so far as it goes, but to produce that amelioration in the education of our workmen which is called for, it must be greatly expanded, not only as far as it relates to the number of establishments and inspectors, but also to the amount of power intrusted to the latter. If Government be allowed to interfere so much in the management of our families and our works as to prevent children under a certain age from being employed in our mines and factories, I cannot understand that reasoning which would prevent it from taking care that those children are sent to receive instruction in a good school. Parents who are totally ignorant of the value of education ought not to be allowed to decide whether they will send their child to be instructed or not. It is owing to this license that we find such a number of non-educated children in even those districts best provided with schools, it being clearly shown that the children are not sent to school out of their own free will, but are sent there by force. This must be remedied; the whole present system ought to be thoroughly revised and greatly extended, and as the proverb "while the grass grows the horse starves," can nowhere be more justly applied than here, it behoves our rulers to take immediate steps to complete the work. The pressing affairs of India will now, no doubt, and perhaps justly, seem to be postponed for some time, and it cannot but be regretted that so many

favourable parliamentary sessions should have been allowed to pass away without anything having been done in this cause. Regrets for bygone cannot, however, help us; but I trust that the attention of those in whose hands the true government of our country lies—the intelligent voters of England—will be awakened, and that among the guarantees demanded from their representatives, one requiring them to devote their greatest efforts to the accomplishment of this important end will hold the first place. For the support of our schools no objection would be felt by the bulk of the population in paying an educational tax, inasmuch as they could not fail to see that it would in a few years cause a corresponding reduction in those taxes gathered for the support of our poor and criminal population.

The religious part of the question should not be a stumbling block. Surely the difference between our religious sects is not so great as to render it impossible to provide teachers for our schools who could impart that amount of religious knowledge necessary in a secular school without giving offence to either churchman or Methodist. Nothing appears more distant than the day when we shall see each agree upon the minor points of their doctrines, and as we wait for this we shall wait in vain, and the result will be that instead of being, as at present, in front of the first ranks in the race of nations, we shall find ourselves, through our own apathy and censurable neglect, left far behind.

May we, by at once applying our shoulders to the wheel, and with the blessing of Providence upon our efforts, be enabled to avert this evil, and to succeed not only in keeping old England in her present position, but in rendering her far more prosperous and glorious than now, is the prayer of—

Swansea, Oct. 7.

## FIRE-DAMP IN MINES.

Sir,—The letter signed "F. G. S.," in your last Journal, is an apt illustration of Pope's couplet, "A little learning is a dangerous thing," &c. If he had read the work he refers to carefully, he would have seen that Mr. Rogers does not refer to a mixture of carburetted hydrogen gas, and a sufficiency of air to cause perfect combustion, but to a mixture of "5 vols. of carburetted hydrogen gas with 40 vols. of air" (see p. 257). Now, the combinations given in the diagram are the only ones possible, unless more oxygen, or a greater volume of air, were present.

Such modes of discussing exact science as "F. G. S." adopts show him to be but little accustomed to such subjects.

Mr. Rogers gives fairly and fully the data upon which he forms his opinion: if "F. G. S." can fairly question this authority, then he must show what is the result of supposing a mixture of 5 vols. of carburetted hydrogen gas and 40 vols. of air. Such rambling statements as those in the letter referred to are not calculated to elicit truth.—Newport, Oct. 8.

## EXTRACTING SILVER FROM IRON PYRITES.

Sir,—Having noticed in your valuable Journal of Sept. 19 a process for extracting silver from iron pyrites, and obtaining such extraordinary results, stating 408 ozs. per ton, I should be glad if Mr. Godfrey will inform me if he obtained so large a quantity from a ton of crude common iron pyrites, or is it any particular quality?

There are so many patents which profess to do very great things, but they never arrive at any practical results; and there are some that are worthy of the greatest praise. If Mr. Godfrey could prove practically that he can obtain so large a quantity of silver, he might calculate upon obtaining any quantity of the material as it is as plentiful as air, and there are thousands of tons now thrown away.

I am aware that several parties are obtaining copper and silver from iron pyrites on a large scale, but not more than 30 ozs. per ton—indeed, 30 ozs. is a large produce to such parties.

I am not at all prejudiced against new inventions—on the contrary, as I have myself succeeded in many, and obtained good practical results. There never were so many practical as well as scientific men required as at the present time, and the age is becoming more true every day that "a little chemistry is a very dangerous thing."

Chemical Works, Kenmore, Perthshire, Oct. 6.

## THE IRON TRADE—THE CORT TESTIMONIAL FUND.

Sir,—Before I am driven to adopt the Circular for the iron trade, should I. Mansfield Marks not do the *amende honorable*, as I proposed in your last Journal, I must trust to your kindness to allow me to refuse, without delay, one or two statements in his letter, which otherwise may prove injurious to myself. He asserts that "I sought his assistance."

I never crossed the threshold of a single door to seek it. He was, unfortunately, introduced to me by his nephew, Mr. Sydney Marks, a respectable artist, residing at 88, Charlotte-street, Fitzroy-square, while I was giving instructions for engraving a portrait of my late father, as founder of the iron trade of Great Britain. He pretends to understand the legal notice of my committee—with the additional signature of Sir William Cubitt as one of the original subscribers to the Fund, given in your Journal of Aug. 29 last—was nothing more than a "withdrawal" of his authority to collect subscriptions up to the date of the notice, although that authority had never been conferred to him by the committee for one minute; nor by myself since October last—12 months ago.

He next asserts that the Cort Testimonial Fund had only "an airy habitation and name before he took it up;" whereas, nearly 15 months before he first dishonoured it, Her Most Gracious Majesty the Queen, by the kindness of Lord Palmerston, had contributed a donation from the Royal Bounty Fund; and numerous other friends, eminent ironmasters, engineers, and Members of Parliament, had given something more than "an airy habitation and name" in aid of my appeal, signed by themselves to the House of Commons, for a more adequate national compensation for my father's services. Again he asserts, with equal truth, "that he had to pay all the expenses for the portrait engraved of Henry Cort," whereas he never sent him one farthing; his nephew, almost ever since on his death bed, blind and ruined in his profession, paying the whole expense, and is now suffering increased distress, and driven from his late residence for want of the value of 150 portraits of Henry Cort, taken from him by his uncle, R. Mansfield Marks. Lastly, he asserts that "his exertions had continued with good success to the Fund, subscriptions having constantly been paid into it by himself, or by his instrumentality;" whereas, not one farthing has been paid into it by himself, or by his instrumentality, since Dec. last, although he has received, himself, during the last nine months, by his own confessions, at Glasgow and elsewhere, more than £600, sterling, pretended to be collected for the relief of the aged daughter of Henry Cort, but which he appropriated to some other purpose.

Besides, long before R. Mansfield Marks, commenced receiving all, and paying nothing to the Fund that he held to be, to create "an airy habitation and name," the Times had laid the foundation stone of a much more substantial edifice, by an extraordinary leader—now usually given to private individuals; and advertising all the subscriptions then paid, gratuitously, observing—"Let any one think of an iron fleet, iron gun-boats, iron mercantile marine, iron railways, iron engines, iron cotton-mills, iron suspension and tubular bridges, iron batteries, iron palaces, &c., and then ask himself what he has done for the management in point of fact, but as they say are the fruits of a man who endowed his country with such an amount of wealth and power; while others have, upon the strength of Henry Cort's discoveries, been raised to the position of millionaires, his children are almost starving."—Times, July 29, 1886.

Mining Journal Office, 26, Fleet-street, Oct. 8.

His own admission of dismissal is attested by a near relative.

## ON THE TRIAL OF PATENT CAUSES.—No. XIV.

Sir,—In proceeding with my observations on the circumstances of Heath's case, I come now to consider the

## TRIAL IN THE EXCHEQUER BEFORE BARON PARKER.

On this trial there was a verdict for patentee on all the issues.—1. That defendant had infringed the patent.—2. That the prior use was only experiment.—3. That the invention in point of fact included the elements of carburet of manganese.—4. That the directions in the specification could be acted upon. Then there was a legal point reserved by the judge on the question of infringement, as that depended upon the legal construction of the specification.

The judge, it appears, left a question on the point of infringement to the opinion of the jury, as to whether the substances put into the melting pot with the iron did form carburet of manganese before they united to the metal? Had he said so to this question they would have denied the infringement in point of fact, but as they say are the fruits of a man who endowed his country with such an amount of wealth and power; while others have, upon the strength of Henry Cort's discoveries, been raised to the position of millionaires, his children are almost starving.

I leave the other parts of the verdict without remark, because they were not disturbed, and proceeded to the judgment of the Court of Exchequer on the point reserved by the judge and argued before the court.

## JUDGMENT OF THE COURT OF EXCHEQUER.

PARKER B., ALDERSON J., GURNEY B., ROYCE B.

The judgment was delivered by Baron Parker. It appears all were "of opinion that there was no infringement of the plaintiff's patent." This opinion of the whole court practically settles the matter, and the jury, who, in the words of the judge, "were highly intelligent gentlemen, and took a real deal of pains."

The ground of this opinion of the court seems to have been that the specification was expressly "for the employment of carburet of manganese, and the mode of using it was by putting a certain quantity by weight of that substance in an unmetallized state into the crucible." No combination of carbon and manganese but that particular one which would "form the metallic substance called carburet of manganese" was intended. Carburet of manganese was held to be clearly identifiable as a distinct substance from other combinations of its component elements, besides that which would produce the substance. Negatively it was nothing else but what its name strictly imported, but positively it was not all that name imported. For whereas that name might be taken to mean, or at least to imply, carburet of manganese, whether in its compound state or its elemental state, "the true construction of the specification" was said to require that it should be understood with reference only to the substance in its compound state. It was carburet of manganese used "by putting a certain quantity by weight of that substance, in an unmetallized state, into the crucible." Here is a distinct opinion as to the scope of the specification, and this opinion cleared the defendant from the direct infringement of the patent. But the opinion also went on to clear him from indirect infringement, and among other reasons assigned that of his not intending to use carburet of manganese, inasmuch as it was not clearly ascertained, and still less was it a well-known fact, that carburet of manganese would be formed by using its component elements as the defendant did. This doctrine of intention, however, was over-ruled. The question for the court is simply as to the fact of infringement, whether intentional or otherwise, the question of intention may affect the verdict of the jury in awarding damages.

Without attempting to give a continuous narrative of the proceedings (Mr. Webster has done this), I will merely remark that Heath obtained in Chancery a decree to bring the following action in the Court of Common Pleas, to try the questions of infringement and validity of the patent.

## TRIAL IN THE COMMON PLEAS BEFORE JUSTICE CREWELL.

The result of this trial was that the judge felt himself bound by the decision of the Court of Exchequer. It appeared to him that as the Court of Exchequer had, "after argument and time taken to consider it," come to the decision above referred to, and that as in respect of the point which they had thus decided, the case before him was "exactly similar," he should be affecting to over-rule their decision if he expressed an opinion on the case, which, said he, "I could hardly venture to do even sitting in banc, with the assistance of my colleagues." Still it did not follow from this that the individual opinion of the judge coincided with that of the Court of Exchequer; it appeared afterwards to be different. But the ruling of the judge is distinct, and places the judgment of the Court of Exchequer before us in an intelligible light when he says:—"My ruling is simply this, that the use of the ingredients of the oxide of manganese and the carboneous matter was not an infringement of the patent, although those ingredients form a carburet of manganese before it entered into combination with the steel. I mean to adopt, as nearly as I possibly can, the decision of the Court of Exchequer."

I wish to draw attention to the words which I have put in italics, and then merely

to remark that the case was carried on a bill of exceptions to a court of error in the Exchequer Chamber, when six judges gave judgment.

WILLIAM SPENCER.

Office for Patents, 50, Chancery-lane, W.C., Oct. 8.

## [ADVERTISEMENT.]

## THE ARUNDELL UNITED COPPER MINES.

Sir,—The report of the adjourned meeting of this company, as contained in your Journal of Oct. 3, has been brought to my notice. From reading it, it would seem that my client, Mr. Vaughan France, had agreed to accept \$500, and the sums received by him, which amount to \$90, 10s. 4d., in lieu of a demand as solicitor to the above company of 1112s. 2s. 4d.

The facts are simply these. Mr. France put in eleven answers for various defendants in the very heavy Chancery suit of Chaffers v. Woolmer, and in September, 1886, was asked to give a rough estimate of what his claim on the company was. He did so, based on the length of Mr. Woolmer's answer, and the result was (estimating the other answers at somewhat less, and for a good deal of general business for the re-constitution of the company) a total of 1112s. 2s. 4d., and which was carried into the estimated liabilities of the company. Subsequently, however, the account being made out in the regular way, Mr. France's costs against the company, under their retainer, were proved to be £471. 1s. and were delivered to the company for that amount; and for that sum, as well as some other costs of his against individual shareholders in the company for business done in the same Chancery suit, after exhausting every possible means of an amicable settlement, by reference and otherwise, Mr. France was compelled to sue the chairman and secretary, who have since settled the matter by giving a judge's order for \$500, payable by instalments, Mr. France retaining the funds he had in hand.

J. CHAFFERS, Solicitor for Mr. France.

Great Carter-lane, Oct. 8.

## TINCROFT MINE, AND ITS MANAGEMENT.

Sir,—I find much dissatisfaction exists amongst the Cornish shareholders in this mine, in consequence of the directors not paying regular dividends—the mine having been, and even now is being, wrought in a manner enabling them to do so, and is not worked for gambling and share dealing purposes. Having been requested by a distant fellow-shareholder (as I was about to visit Cornwall) to make every enquiry as to the standing capabilities of, and general feeling towards, the mine, I learn if a new shaft were sunk at Martin's east a very considerable saving would be effected; this should have been done long since. Every preparation has been made for sinking the old shaft, the machinery is in the most effective order, modern improvements for dressing the tin introduced—in fact, the local management reflects the greatest credit on those who have charge of the mine.

The reason assigned by the shareholders here is, that the directors and London management absorb \$500, annually; that only 25 shares each forming the requisite qualification, and their duties only necessitating a monthly attendance, that sum pays good interest on their outlay for their loss of time, irrespective of dividends, besides the opportunities afforded them of dealing in the shares, they knowing the financial position of the mine, which they are well aware is very different from that of the majority of shareholders. If it be intended to continue this method, surely the position of the mine should be made known, that the public may have fair opportunities of purchasing, and enabling those desirous of selling shares to realise fair prices, from which it is felt they are now debarred.

The books on the mine are most beautifully kept; the accounts, being perfectly clear and perspicuous, are all that can be required in any merchant's or mining office. It would be well if the system were copied by many other leading mines. If the mine be in a position to pay dividends, why not do so? I appear to be the complainant here. It is fully believed the mine is in circumstances to do so, in which, after this investigation I could give, I most cordially join.—Oct. 8.

ALEXIS.

## QUEEN OF DART MINE.

Sir,—It is well known that you have pleasure in disseminating the knowledge of any facts connected with legitimate mining, and I am induced to ask the insertion in your valuable Journal of the facts which are connected with this mine, the meeting of which took place on Monday, and at which I was a spectator. The meeting was held in the backing-house, around which are now lying heaps of copper blocks from the 20 ft. level, east of shaft—there may be 40 or 50 tons. On examination of the quality, it was quite clear that the muddle, which is admitted is too plentiful, is beginning to yield to the copper; and we have no doubt we shall find in the 30 that the mastery which is showing itself there will be complete in the 40. The stopes in the 20, east of shaft, are very rich, though not so in the west; but there is no doubt that deeper we shall catch the shoots from the west.

I heard it said by some experienced miners who were walking over the floors, and who had been brought there by the meeting, that they knew of no small mine so complete in all its mechanical adaptations, and, being worked by a fine lead from the Dart, can be so economically carried on.

There was a kind of panic existing a short time ago among the shareholders, that the mine had lost its right to public favour, which was caused, probably, by some shareholders having been unable to pay their calls, as well as from the general gloom which pervaded all mining undertakings. That has been entirely dispersed, for every farthing is now paid up. The works arranged to be done forthwith, such as the sinking of the boundary shaft between the great eastern course and slide, as well as the 20 east of shaft, give the greatest promise when completed.

The meeting separated, having very willingly responded to a call sufficient to pay every debt upon the mine, as well as to provide for the coming three months' cost. The shareholders expressed themselves well satisfied with the proceedings of the meeting, which was presided over by Mr. John Marshall.

J. M.

Ashburton, Oct. 6.

## STRATHALBYN MINING COMPANY.

Sir,—In your Journal of last week, I notice a report of the proceedings at the extraordinary general meeting of this company on Sept. 25. I conclude that this report was furnished to you by the secretary of the company, or by his brother, Mr. Webb, as I observe that the remarks of the latter are given *in extenso*, while the counter-statements of myself and others are so abridged as to leave the public in ignorance of the real merits of the case.

The report likewise omits to say that, although a majority of votes appeared in favour of Mr. Webb's list of directors, this arose from the large number of small holdings, and not from the larger amount of share capital—the fact being, that we had the support of the larger amount of stock.

My principal object now, however, is to correct the misapprehensions which, I fear, your report must create in the minds of the shareholders—that I and my friend, Mr. Johnston, accepted the seats to which we were elected as directors. I stated publicly at the meeting, and subsequently by note to the Chairman, that I could not sit at the board with Mr. Webb and his nominees as my colleagues. Our opinions as to the management differing so widely, I could not, in justice to myself, and as a trustee for others, appear to sanction what I should not have the power of effectually opposing. I can better afford to risk losing my property than incur such a responsibility. I believe that Mr. Johnston, in declining to become a director, has acted from the same feelings that I have expressed.—Oct. 8.

CHAS. HOLLAND.

P. S. I subjoin a note, showing the extraordinary system of estimating votes, by which it will be apparent that small holders, by combining, may obtain a majority of votes over large shareholders, although the latter possess a greater amount of stock:—"Every shareholder shall have one vote for every share held by him up to 10; he shall have an additional vote for every 5 shares beyond the first 10 up to 100; and an additional vote for every 10 shares held by him beyond the first hundred, provided that no shareholder shall be entitled to give in his own right more than 100 votes."

## BRITISH AUSTRALIAN GOLD MINING COMPANY.

Sir,—Your correspondent from Bath wishes for more particulars regarding the unfortunate failure of our last enterprise, under Mr. George Milner Stephen. I am instructed to say that the explanations given by that gentleman have been most meagre and unsatisfactory, without any account of expenditure of the funds entrusted to him. The commissioners selected to control his measures consented to his joining the interests of our company with a joint mining association, which placed our engine upon a quartz reef at Fryer's Creek. Mr. Stephen's first report of working was promising. He seemed to have left no stone unturned, and, carrying out this work, everything fell into confusion, and the commissioners now report that, in their opinion, the place was ill-selected, the constitution of the association ill-formed, and the favourable report first sent entirely fallacious. The small remnant of the company's capital sent out, under the resolution of the last general meeting, for the support of Mr. Stephen's proposals, has been fruitlessly expended, and nothing now remains but to sell whatever machinery and stores remain there to meet the demands reported to be still in arrears. The commissioners have been requested to carry this into effect, and to close all accounts as speedily as possible, when a sum of the same will be returned, but only published; but as there remain no funds for office rent, or establishment of any kind, my services have of necessity ceased. References to the papers of the company, or for any further information, in the mean time, may be made at this office.

HENRY F. WARD.

1, King's Arms-yard, Moorgate-street, Oct. 8.

Mr. Crofts sends us the following remarks on the market during the last fortnight:—

The most pressing task for a reviewer is to record an animated state of the market, whilst the best ingredient in a reviewer is candour. Since our last remarks, therefore, it is worthy of note that the market has assumed a chequered character, not a little difficult to describe, if, indeed, to describe it does not require more talent than the writer presumes to lay claim to. The business has consisted, especially during the last week, in the buying of only such shares as have the presumption in their favour of being, relatively to former prices, cheap; and thus a tolerably large business has been transacted in a number of mines, of which Alfred Consoils, North and West Basnet, Lady Bertha, Wheel Harriet, Margery, Ding Dong, and Pendern, form a part; whilst, with the exception of East Basnet, which have had a large rise, the dividend mines, as a mass, have been neglected. It is true that a considerable amount of business is always done, of which the mining market (so-called, and as represented in part by the Mining Exchange) takes no cognizance whatever; and which business, by possibility, forms the chief sum of mining transactions, and simply because the operators are capitalists who seek permanent investments apart from the excitement of speculation. The ostensible market is now divided into only two classes of operators—those who are masters of the art of "making prices" or "jobbing," to buy euphonically designated, and those brokers who come into the market simply to sell or sell upon absolute orders. The vocations of these two classes are "far as the pole asunder," for whilst the latter class more or less undertake to guide their friends and correspondents in the choice of stocks, the "jobber" deals only upon a data of some future rise or depression, the profit or loss upon which is to go into his own pocket. The commingling of interests thus described forms, however, "the market," and justifies the fear first expressed in our ability to describe it. Two untoward events, as bearing upon the future value of all speculative property, must be noted—the American monetary crisis, and the raising of the rate of interest by the Bank of England from 5½ to 6 percent; the latter, being the most proximate event, may possibly have more influence over the market than the former, whilst the change it should produce in the policy of speculators it is for them to study. If the market value of stocks be likely to recede, of course, sales should be made rather than purchases; but the safe course is, as we believe, a quiescent one—not to part with any stock well bought, and having for its basis either regular dividends, or a sound financial condition. The American crisis, like any other acute disease, is too severe to last long, whilst a rise in the value of money, it should be remembered, is merely an indication, not of absolute scarcity of the circulating medium, but of more demand for it; and that being the admitted case, in what other direction can capital be employed, at this moment, with more prospective advantage than in sound mining shares?



## Mr. Lelean communicates the following:—

The Share Market has a very lively tone. A great many transactions have taken place in Lady Bertha, East Basset, Edward, St. Ives Consols, and Alfred Consols. The price of the shares in the 120s, at Alfred Consols, is reported to be very high, and consequently a quiet rise may be expected in the price of shares. At Lady Bertha, there are indications of the near approach of the tide, and it is confidently expected it will be out in the 30 in a fortnight from this date, if not sooner. All the operations of the mine are being conducted in a satisfactory manner. East Basset have advanced from 75s. to 100s.: this is one of the few we recommended some little time since, when they were 35s. per share. North Levant is looking well, and shares must advance shortly. At Providence, a rich discovery of tin has been made in the 75 west, now worth 20s. per fm. Last month's sale of tin was 50 tons, at a cost of less than 800s. At Margery, in the 60 east the lode is worth 12s. per fm. and at the American shaft 25s. All the other parts of the mine have improved. Their first sale of tin will take place this month—about 6 tons. At Treilony, they have out a lode in the 50 worth 10s. per fm., and improving; this is a very important feature in the mine. East Providence is looking well, and will make a good mine. Wheel Edward is looking remarkably well, so is Stridridge Consols. All the above shares are worth buying at market prices.

## MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

The Mining Market has in some measure participated in the inactivity occasioned by the national fast; still a fair amount of business has been done, and in several mines a considerable rise in price has taken place—viz., East Basset from 75s. to 100s., 110s.; and Copper Hill from 190s. to 250s., consequent on improvements in these mines. Grenville seem to have been unduly depreciated in value, for while the prospects of the mine, according to weekly reports of the agent, are quite as good as when the shares were selling freely at 3 to 3½, the price has dwindled down to 1½. The reason of this great decline can probably be explained by the parties who are known to operate largely in this mine. Those violent speculations may tend to pecuniarily benefit those operators, but the vast amount of injury it does to legitimate mining must be quite apparent to those who desire to see this important branch of our native industry stand well with the public, who are really the chief source from whom support is derived for the development of mining property; there are, notwithstanding, sufficient inducements for the outlay of capital in good dividend and progressive mines, paying, as they do, from 15 to 20, and in some cases, as alluded to above, 30 per cent. in a short period. While, however, those legitimate concerns are open for investment, it is astonishing to witness with what avidity some parties rush into new and worthless schemes, irrespective of any real merits attached to them, or the respectability of the parties concerned. The result is generally loss, and consequently disappointment and disgust with mining altogether, while a little common sense and prudence might have ensured them a fair profit on their outlay. With all the unfavourable impressions formed by the public against mining brokers and dealers, it is only fair to presume that there are many in the mining market who are as jealous of the slightest imputation on their character as any other class of brokers or dealers in the City. The many cases that have come before the public eye of late render a few words of caution necessary from all who have the well-doing of the great mineral interest of the country at heart, giving, as it does, employment to a large number of the working classes; affording also respectable employment to many parties, as the medium of buying and selling shares in the different mines in the list, either for principals or on their own account. The mines that have been chiefly dealt in during the week are—Alfred Consols, 13 to 14; Grenville, 1½ to 1½; Wheel Mary Ann, 4s; Northcroft, 4 to 4½; Gawdon, 1½; East Basset, 75 to 100; Kelly Bray, 1½ to 2; Lady Bertha, 18s. to 1s; Stridridge Consols, 2½ to 3½; East Alfred Consols, 2½ to 3½; North Frances, 15½ to 16½; North Basset, 15½ to 16; St. Day United, 34 to 35; Wheel Wray, 5 to 5½; Hingdon Down, 5½ to 6; Great South Tolgus, 16½, 17, 17½; Wheel Edward, 9½ to 9½.

**THE ASHBURTON DISTRICT.—**WHEAL WHIDDON AND BROWNHILL.—I have seen many observations of late on this district, and the writers are unanimous in pronouncing it as unprofitable and highly uninteresting, and completely worthless to the attention of capitalists. I most emphatically concur in this belief, and cannot entertain the least idea why it is so much neglected. I exclaim, Ashburton men! why do you not show an energetic front, and make a grand effort to start one of your many promising shafts? Try what you can do at Whiddon and Brownhill. Your labours will be soon crowned with success: I am confident in my belief of this. Some little time since, I saw the remarks of a miner of the district in your Journal, who stated that "yellow copper ore could be found profusely scattered over the surface in this district." This I can confirm—cart loads of good quality ore have been gathered up in piles by the party now in possession of the mine, and I have no doubt very many tons more can be obtained in the same way. These are facts, Sir, that ought to attract the attention of capitalists, and which we do not find often paralleled. This shaft is but a short distance to the south of the once celebrated Ashburton United Tin Mine, which fully demonstrates the authenticity of the various remarks and favourable opinions thereon. What can I, or what can any one, say more than has been said to urge you of the district on to action? Abandon idleness, and embrace perseverance and energy; if you cannot raise the little I repeat, only the little—capital you require for working, appeal boldly to men of capital who are so fond of honesty, and I feel confident you will succeed. Knowing, as I do, being a miner all my life, the mine and district, as well as the next man, I venture to offer to assist you, as far as my limited means will admit.—J. C. Hennock, Oct. 7.

**WHEAL EDWARD.—**The suspension of the sinking of the shaft on the south lode, for the purpose of cutting the pit, &c., has caused a little loss in the shares. It should not be forgotten, however, that the bottom of the shaft is the most valuable part of the lode, and is estimated at 200s. per fm. for the length of the shaft. Large profits must necessarily result from future operations.

It is with great pleasure that I find operations are at last directed to the development of the eastern section of STRIDRIDGE WHEAL BULLER. This is a move in the right direction, and a short time will, no doubt, fully justify the policy of working this part of the shaft with the greatest vigour. Indications of a very promising nature have already begun to exist, proof of which is found in the clearing up of one of the old shafts, where all the stuff drawn up is carried to the stamps, and found to be good work. Some large and rich stones of tin have also been found in the old men's workings, and there can be little doubt that, as the clearings of these workings are extended, more valuable results will be obtained. It has long been thought by many practical and experienced men, that the lode in this part of the shaft, which is a continuation of the Wheal Metal lode, is destined to compete with the famed Wheal Vor lode for splendour and productiveness. Analogy, at least, indicates the great probability of vastly rich deposits of tin being discovered in depth. It is gratifying to believe that the warmest anticipations of the company will, in all likelihood, soon be realised, and the returns of the mine be secured on a permanent basis. May abundant success attend the enterprise.

**ST. DAY UNITED** is looking better than it has done for a long period, and with the present price of tin and copper, there is good reason to expect an increase of dividends.

**TINGROFF.—**The Highburrow part of this mine is looking well—better than usual. The mine is now making very large returns of tin and copper ore. The low-priced ores sold from this mine are from the tin refuse, after burning. The new self-acting frames for cleaning tin, 30 in number, have just been set to work. These 30 machines can be attended by two boys only, thus saving five or six hands' labour, besides doing the work more effectually than before. This very curious and ingenious machinery was originated by Capt. Teague and the agents of the St. Day United Mines, and reflects much credit on their mechanical abilities.

**NORTH GRAMBLER.—**A fine discovery has been made in the 50 at this mine, which, if it hold, will soon make this property of immense value. Being so well situated and surrounded by great mines, it would indeed be hard if this should be the exception. The splendid stones of ore we have seen bears the strongest presumptive evidence that the goal so ardently desired has been reached. The stone contains rich gossan, black, grey, and yellow ore, and is of the best possible description.

**CARN BREA MINES.—**These mines are making very large returns of tin ore. The copper returns are falling off, but the tin reserves are very great, and will always be a source of large revenue for many years to come.

**REDRUTH DISTRICT.—**The mines here, although so celebrated, are not returning so much ore as previously. Buller is looking much better, and promises well. Several of the mines are opening up ground from which great returns must be made. The good prices have induced some to work out more than they were justified in doing, and now they have to "try back," and open up before they can realise. Large reserves are standing in South Frances, where there are scores of good tribute pits to be let, if necessary. Several are still opening up new ground, and have many years' work discovered. Hundreds of fathoms of tin ground are standing in the backs for some future day, which it would now be impolitic to disturb.

We are glad to hear from Bristol, that the greatest portion of the shares in Mr. ENO'S ASHBURTON TIN AND COPPER MINES have been taken up.

**RANSLEY HILL MINE.—**Here is probably the mining prize of the period, nothing like it having been seen since the discovery of the Devon Consols. The samplings will soon declare a tale I dare not utter, as it would be incredible; I, therefore, prefer waiting, and allowing facts to speak for themselves.

**AT SOUTH CRENNEY MINE,** the prospects have for some months past been on the improving order, particularly in the ends driving westward from the 24 fm. level down to the 94. The 105 is approaching the same run of ore, and is promising. Every preparation necessary to sink down to the 120 is being vigorously prosecuted. It will be remembered by all who know the locality that the great mines adjoining—Crenney, Ostfield, and West Abraham—many years ago realised their large profits, and stood where the Devon Great Consols now does—at the head of the tin lode. The ore improved in quality when they got down to the 100 fm. level, was very productive of rich ore from thence to the 140, and continued as deep as the 180. It will be seen by reference to South Crenney report, among our British Mines, that they have from 1170 to 1200 tons of ore to take away from the backs of their various levels well. They sold, on Thursday, 80 tons for the month, and will increase monthly.

**AT NEW CROW HILL,** the 22 fm. level east is improving—some good stones of lead, and a very kindly lode. They are dressing lead, and hope to have a sampling this month. They have not dressed any jack of consequence since the recent strike, and the floors are literally full of jack and muddle. They have about 80 tons of the latter ready for shipment.

**NORTH TAVY.—**A discovery of the greatest importance to the district has been made at this mine. It has been found that various portions of the lode, which has hitherto been worked for copper, are very rich for tin, which is contained in a beautiful soft chlorite, which stamps easily, and with a slight waste. The mine is dry by an adit 60 fms. from surface, and possesses every advantage for being worked efficiently and economically by ample water-power. In the 20 fm. level, which has been driven 20 fms. west and 50 fms. east of the shaft, good work for tin has been discovered for 70 fms. in length and 4 fms. high; and in the 30 fm. level for the same length, with 12 fms. of backs. The deeper level has not yet been cleared, but there is no doubt that such a fine strong lode holds in depth. The chances for copper and lead are also very great, as nothing has been seen west of the large cross-course which runs through the shaft. Large returns of each have been made in former workings, but no one suspected the existence of tin, and there are now on the old burrows large piles of stuff, from any one of which you may select stones of tin, which have, on assay, yielded from 10 to 12 cwt. to the 100 cwt. Offers have been made by a captain in the neighbourhood to take these heaps at 5s. in 17, although he would have to cart the stuff three miles to the stamps. This lode runs through other sets, and since this discovery tin has been broken from it more than a mile from the present workings. Similar results may possibly be obtained in the adjoining mines of Virtuous Lady and Wheal Bedford. Bedford Consols is working on the same lode, where tin has also been found of some value. A considerable demand for shares has arisen in

the neighbourhood and elsewhere. The mine is divided into 4000 shares, of which the majority are firmly held by Plymouth adventurers, who have met with a prize at last. The office is at Mr. Edward King's, 27, Austin Friars.

**GREAT HEWAS** is returning a large quantity of tin monthly, in addition to which very large quantities of tin ground are being laid open. This mine seems destined to take its place among the best tin mines in Cornwall.

**DEVON GREAT ELIZABETH COPPER MINE.**—A preliminary meeting of shareholders in this mine was held at the offices of Mr. Nicholson, 57, Old Broad-street, on Thursday, when the rules and regulations (according to the book-book) were adopted, and the agents for the official and practical management of the company were appointed. Upwards of two-thirds of the shares were represented at the meeting. The report of the mine presented continued to give the most cheering and flattering account of the prospects. That portion of the lode which is now being carried in the southern part, 3 ft. wide, 18 in. of which is very rich indeed, chiefly composed of grey and yellow copper ore, estimated about 4 tons per fm., or about 30s. The northern portion of the lode, as well as other points of the mine, hold out more than ordinary encouragement. Further particulars appear in an advertisement in another column.

**LOSTWITHL—**This neighbourhood promises to become a mining district of some importance. A set has recently been obtained of Lady Granville, adjoining Boonoon, and a remarkably fine lead lode (bearing 30° east of north and west of south) has been cut by east-south-east, and opened upon about 100 fms. in length, and from its composition the party wishing to expect an abundance of silver ore at a shallow depth. The gossan only 13 ft. from surface, contains 15 ozs. of silver to the ton. The lode is about 6 ft. wide, with two well-defined walls, and the underlie not more than 6 in. in a fm., containing hornspar, gossan, and some quartz, quite as transparent, but not quite so soft, as fluor-spar. More will be heard of this set in a short time.

**LACKMORE NEW MINING COMPANY.**—A notice of this adventure was inserted in the Mining Journal of Oct. 3, and the advertisement will be found repeated this day. The time limited for taking up the shares is Thursday next (Oct. 15), and we are informed that a large number of applications for them have been received.

**SILVER BROOK.**—Being a shareholder in this mine from the commencement, and finding the committee have been obliged to offer the sett, machinery, and lease for sale, on account of some of the shareholders neglecting to pay their calls, I venture to hope that some influential party may purchase the whole in one lot, and give it another trial, by continuing the sinking of the engine-shaft and extending levels, as described by the captain on the mine. There is also an important part in the sett undergoing costeaning and exploring both north and south; the sett being large, and so rent to pay, gives great facilities for explorations over different parts of it. I would recommend any party wishing to purchase the mine to employ Mr. G. Henwood to inspect the whole sett. He would see where the lead was found, and where there have been above 1000 tons of jack or zinc taken from; and as Mr. Henwood has often mentioned in the Mining Journal that Jack is a good neighbour, perhaps this mine would prove, as many others have to a new company—that we have done nearly all the work, and allowed others to reap the benefit. In exploring 300 fms. south, there are strong indications of an east and west lode, so that without a further trial this might be a valuable property thrown away.—G. STARRKE: Ashburton, Oct. 8.

**NORTH FRANCES** is improving in depth. This mine, being situated in the locality of Carn Brea, bids fair to become a good property.

**TYWANNHAYLE.**—All the heavy parts of the engine are on the mine. Mr. Sims, the engineer, has received instructions to proceed with its erection without delay. An engine will shortly be purchased for the purpose of drawing, and a steam capstan. Instructions have been given to proceed with every branch of work as fast as strict economy will admit.

**SOUTH FRANCES.**—A good discovery has been made in one of the bottom levels in this mine, where a lode has been cut, containing rich grey copper ore, from 4 to 5 in. wide. This mine will again increase its dividends, the new steam-whim, skip-road, and wire-rope, being now paid for. An important improvement in the application of the skip, and method of filling the skip by men at the bottom, has been tried, with the most perfect success. It would be worth the while of agents, when putting in skip-ways, to visit this and see it at work.

**WENDRON UNITED.**—An important lode has been cut in this mine, yielding tin of excellent quality. It was cut in the shaft, and will soon put this mine on a good footing. Stamps must immediately be had, when returns may soon be made.

**THE FAST DAY** was strictly observed here by the shopkeepers, and many mines, where men and boys were idling about the streets and lanes, much to their own and other people's discomfort. It is doubtful but that in many instances not only one day's holiday will be kept but two or three beside, which will necessitate a fast, perhaps, for some poor children. It is generally considered here that a Sunday would have been most appropriate for a day of humiliation and prayer: this is anything else among our working population. It has caused serious inconvenience at some of the largest mines, where many parties were returned. We know of one case where 2½ tons of tin will not be ready by their proper time, and will decrease their returns by that amount—say, 300s. The post-office, too, being closed as on Sunday has caused great inconvenience to our village residents.—Redruth.

**ROSEWALL HILL AND RANSOM UNITED.**—We understand that the 40-in. pumping-engine (manufactured by Sandys and Co.) was set to work at the Rosewall Hill and Ransom United Mines, on Sept. 30, and answered admirably. They are busy building the house for the steam-whim, which will soon be finished, and the house to receive the steam stamping-engine is already built. A contract has been entered into for the draining of the two engine-shafts to the bottom of the mines, together with all other work necessary to put them in complete working order, for the sum of 580s. The carpenter's and smith's shops and counting-house are completed. In clearing the mine very rapid progress has been made, and there is no doubt operations will soon be commenced upon tin ore, and with every prospect of great success. In a letter from the manager, he states his firm conviction that "in a very short time these mines will rival the others he has the honour of representing"—Wheal Margaret and St. Ives Consols.

**THE CHANCELLORSVILLE COMPANY'S QUARTZ REDUCTION WORKS.**—Although we are not able, as anticipated, to announce the actual completion of the Chancellorsville Company's Works at Frodham, we are informed they are so nearly finished as to expect in our next Journal to state the day when active operations will commence.

We understand that Mr. Henwood, as we had anticipated, is receiving the utmost attention from his countrymen, every mine and every improvement being thrown open to his notice, and every facility for his doing so afforded. He has been one week in the Redruth district, and has examined several of the extensive mines there, at surface and underground.

## MINING IN IRELAND.—At Swanson, on Tuesday, the produce of Irish mines realised 11,000l.:

Knocknashon	452 tons.	£5487 14 0
Berehaven	41 "	4337 13 6
Holyford	50 "	931 12 0
Cronebane	7 "	111 0 0
Tigrony	7 "	132 4 0

One parcel of Cronebane ore (31½ prod.) obtained 34s. per ton; and from Tigrony (30½ prod.), 33s. per ton.

## CORNISH STEAM-ENGINES.

Abstract from Breene's Cornish Engine Reporter, No. 127, from Aug. 21 to Sept. 20:—

PUMPING ENGINES.		
Number reported	22	
Average number of strokes per minute	4-1	
Gallons of water drawn per minute	2353	
Average duty of 10 engines, being million lbs. lifted 1 ft. high by	60-6	
the consumption of 1 cwt. of coals	631-3	
Actual horse-power employed per minute	3-8	
Average consumption of coals per horse-power per hour, in lbs.		
ROTARY ENGINES.—WHITING.		
Number reported	17	
Number of kibbles drawn	30,163	
Average depth of drawing, in fms.	161-3	
Average number of horse-whim kibbles drawn the average height	60-7	
by consuming 1 cwt. of coals		
Average duty of 7 engines, as above	21-8	
STAMPS.		
Number reported	5	
Average number of strokes per minute	9-3	
Average duty, as above	51-6	
Actual horse-power employed per minute	15-4	
PUMPING ENGINES DOING HIGHEST DUTY.		
Fowey Consols, 50 in. single	83-4	
Par Consols, 50 in. single	81-2	
Pembroke and East Crenney, 80 in. single	70-2	
Par Consols, 72 in. single	63-9	
Pembroke and East Crenney, 70 in. single	62-0	
West Fowey Consols, 60 in. single	61-3	
WHIM ENGINES.		
Fowey Consols, 22 in. double	28-5	
Fowey Consols, 18 in. double	24-2	
Par Consols, 24 in. single	23-5	
STAMPING ENGINES.		
South Caradon, 26 in. single	51-6	

**GUN COTTON.**—The Times states, Austrian engineers are trying experiments with this material at Krems, and that it has been found to answer for mining purposes, but is not applicable for the use of artillery. Our readers may remember, a few years since, the dreadful explosion which took place at the Messrs. Hall's factory, where several lives were lost. A series of trials, a short time previous to that accident, was made at several of the German mines in the Harz and Saxony: the result arrived at was this—a manipulation not only very expensive, but likewise dangerous in the highest degree. Gun cotton, according to the reports then delivered, was cleaner, and had a greater explosive force than gunpowder for blasting, but on account of the care and caution necessary in its preparation, as well as subsequent use, combined with the cost, it was not deemed advisable that it should be recommended for employment in mines.

**FATAL GUNPOWDER EXPLOSIONS IN CORNWALL.**—A dreadful explosion took place at the East Cornwall Gunpowder Mills, at Herodsfoot, by which four men, named Edgecombe, Whiting, Rogers, and Pett, were killed. The shock was felt at Liskeard; buildings adjoining the mills were unroofed, and considerable damage was done. With the death of the men the cause of the explosion is involved in mystery. Rogers has left a widow and ten children, and Whiting was only lately married. An inquest has been held on the only body found, the other three poor fellows having been blown to atoms. The verdict of "Accidental Death" was returned, and the jury recommended that a smaller quantity of gunpowder should be kept on the premises. It appears that a similar accident occurred on the same premises three months ago.—An explosion of gunpowder took place on the same day at Wheal Lovel, Cornwall, by which two men, named Wearn and Dinnie were dreadfully injured. The former is likely to recover, but Dinnie died the same night.

## MEMS. OF MINES AND MINERS.—No. XIX.

**Capt. WILLIAM PASCOE, Camborne.**—If to judge of a man by his works be a fair and just criterion of his worth and abilities, we could desire no higher standard for the object of this notice. He is like the noble residence he has erected for himself, on a hill, in an exalted situation, and cannot be hid. There his ability is equally displayed in his taste for architecture and gardening, on the mine by improvements in machinery, in studying the welfare and comfort of the people employed, and the ability displayed underground (as we purpose making a Photograph of the South Frances Mine, it will be seen whether we over-estimate the latter part of our observations). By his attention to his duties he has mainly aided the splendid success his noble mine has achieved, and conducted to the enormous profits derived, and commanded the confidence and friendship of his compatriots (for he is a shareholder) and employers; by his urbanity to, and well-known anxiety for the comforts of his inferiors has he earned their love and respect, as evidenced by the manner in which they always speak of and to him. When we say, in his neighbourhood no man is more respected and beloved, we, without disparagement to any person, only offer a just meed of praise. Capt. Pascoe is among his fellows—that is, eminent captains,—allowed the highest meed of their approbation: when consulted on any important measure (for captains do consult each other occasionally), he offers the best advice in the kindest manner, and with a readiness only surpassed by his suavity. He, as may be supposed, is idolised by his numerous family, in whose breasts he reigns supreme. Capt. Pascoe was resident many years in Wales, where his practice founded that success he has since obtained. To be the manager of one of the largest and richest mines in Cornwall is a post of no easy attainment, and no small anxiety when attained. We wish him long life to enjoy the handsome property he has so worthily acquired, and which he so liberally and judiciously distributes in genuine but not extravagant hospitality, and in the encouragement and employment of labour. The captain has the charge of two or three other smaller mines, now said to be most promising concerns. He has been a large speculator, but never repines at occasional losses. He enjoys a wide reputation, and is much employed in giving opinions on the prospects of various mining localities, a preference to which his position justly entitles him.

**Capt. RICHARD TREVITHICK, Dolcoath Mine.**—There is scarcely a work in any language on mechanics that does not contain this worthy's name; there is scarcely mentioning it in any company throughout Great Britain in which it is not as familiar as "household words." To mention it in Cornwall without its being known would be impossible. There, as a miner, a mechanist, and a gentleman, he is well remembered, and will be as long as there is a steam-engine or a Cornishman in existence. To his splendid abilities is due a debt of gratitude Cornwall can never repay, but which, we believe, she fully appreciates; without his inventions her machinery could not have made that early and effective progress and celebrity it has obtained. There is scarcely a portion of this wonderful specimen of man's ingenuity which did not receive some improvement from him. Beginning with the boiler throughout all its details, the hand of Trevithick is recognised. To enumerate all would be to write a volume, which is not our object, that being merely to show what abilities have been and are engaged in our mining industry. When such brilliant talents as Trevithick's have been engaged, we think we advance a host of arguments. Capt. Trevithick was for many years agent at Dolcoath Mine, whence he went abroad. Not liking the country, or most probably feeling he was out of his sphere, he soon returned to that land where his mighty powers might have greater scope, though, like many other distinguished savans, his endeavours were not rewarded in pecuniary matters so largely as they deserved. Capt. Trevithick was possessed of a mind superior to these. In some of our previous memoirs we have said he was the companion of Andrew Vivian, Hornblower, and other kindred spirits, who have rendered their own and country's name so exalted. His son now fills a most important and lucrative situation, with honour to himself and satisfaction to his employers, bearing a name we hope he will feel it his duty never to sully.

**Capt. JOHN WEBB, Great Hewas Mines, St. Austell,** is another example of Cornish mining ability and perseverance: unassuming, kind, and attentive, he gives profound satisfaction to all who have dealings with him. Capt. Webb is well known as a mine inspector, having had considerable employment in that capacity. His reports have been distinguished for perspicuity, candour, and ability, showing in a moment that he fully understood the nature of the subject he had in view; they are invariably judiciously written, and enter into detail and data, too frequently neglected or overlooked, evidencing a careful digest of his observations on the mines' appearances. The Great Hewas Mine is a present and favourable specimen of him as a miner; say more we could not; the mine itself shall speak for us. Still in the prime of life, we hail with satisfaction the progressive state of his mine, which we hope he will live many years to witness crowned with that success he so confidently predicted, and to which his persevering efforts over difficulties and annoyances of every kind have so eminently contributed.

**Mr. BATH, landscape painter, Plymouth.**—This clever artist was also a miner, who on receiving an injury took up his pencil for a living. Mr. Bath was at that time a young man. He received encouragement from the late Mr. Spry, the then manager of the Cornish Colour Company's works, Penryn, who not only gave him some little insight into the properties of the various colours, and their combinations, but gave him instruction in perspective, he being himself a connoisseur. He also generously supplied him gratuitously with a few colours, oils, &c., and encouraged him by purchasing some of his pictures himself, and persuading his friends out of charity to do the same. Mr. Bath made considerable progress in his native place. On his removal to Plymouth, as a wider sphere of action, he found in the beautiful banks of the picturesque Tamar ample subjects for his portfolio and easel, which he was by no means slow to avail himself of, producing a vast number of clever little pictures, which met with a ready sale, enabling him to elevate himself in society considerably. In his case, too, the terrible misfortune, the want of education, was a serious drawback, Mr. Bath not being qualified to fill so commanding a situation as he would have done. Though labouring under several disadvantages, Mr. Bath produced many meritorious works, which realised high prices. The number of "pot boilers" he was necessitated to dispose of rendered his pictures of less value than they would have otherwise commanded, and which had he been able to realise would have enabled him to bestow more labour and finish than are observable in his later works. We do not know whether Mr. Bath be still in the land of the living; if so, he must now be of a good old age, as it is between 30 and 40 years since the author first saw him at the Cornish Colour Company's works.

**Mr. THOMAS GARLAND, Fairfield House, Illogan.**—This gentleman, as pursuer and adventurer in Cornish mines, is equally entitled to our notice, being as distinguished in the one as the other; suffice it to say he has been successful in both. As a consumer of some of their produce, he has been more particularly distinguished, being the largest manufacturer of arsenic in this country, whence considerable quantities are shipped. Mr. Garland in early life was celebrated for his abilities as an author, many essays of great ability proceeding from his pen. Few men enjoy a larger circle of acquaintances than Mr. Garland, or are more deservedly respected by them. Although beyond the middle age, Mr. Garland possesses a vigorous manhood, the effect of a well-spent early life, which vividly we sincerely wish him to enjoy the fruits of his honest and exemplary industry.

**AN ATLAS GRATIS WITH THE DISPATCH.**—On and after Sunday, Oct. 4, 1857, each copy of the Dispatch will be accompanied with a Coloured Map, a Chart, or the Plan of a principal town, so as to furnish to each subscriber, gratis, a most comprehensive, complete, and useful atlas. The size of the engravings will be that of one page of the newspaper. Six maps and two plans in each year will be of double the size. It is hoped, in the course of a short time, that the Dispatch Atlas will contain more names and positions of places than any other English publication of the kind. The counties will be given separately, and, where large, divided. Within the first four months, India will be more accurately and completely delineated, in a series of nine maps, than in any British atlas. The names of the artists will be the best guarantee for perfect accuracy. The engravings will be in the highest style of art, involving a cost of many thousands of pounds. Mechanics' institutes, educational establishments, hotels, reading-rooms and coffee-houses, will, in possessing the Dispatch Atlas, be supplied with a daily want. The Dispatch Atlas will be forwarded gratis with the paper at the usual price—3d. per copy, or 6d. stamps. The Friday evening edition may be received in the most distant parts of the kingdom on Saturday morning.—Office, 130, Fleet-street, London.

••• TAPPING'S PRIZE ESSAY ON THE COAL-BOOK SYSTEM, enlarged and augmented, with Notes and an Appendix, can be had at the MINING JOURNAL office, 24, Fleet-street.—Price 5s.







**WHEEL TRELANTY.**—Wm. Bryant, W. Jenkin, Oct. 5: Smith's shaftmen are still engaged in cutting a trip-lane in the 142. The lode in the 132, north of Smith's shaft, is at present disordered by a slide; in the same level south it is 1½ foot wide, worth 7¢ per fathom. The lode in the mine sinking below the 120, south of Smith's shaft, is 2½ feet wide, and worth 10¢ per fathom. In the 120, north of Chippendale's shaft, it is 2 feet wide, and worth 10¢ per fathom. We have also a lode in the 120, south of Chippendale's shaft, for ventilation, the lode in which is 2 feet wide, and worth 7¢ per fathom. In the 108 north the lode is 1½ foot wide, and worth 12¢ per fathom. In the 98 north it is 1½ ft. wide, and worth 8¢ per fm.—South Mine: In the 142, south of Trelawny's shaft, it is 3 ft. wide, and worth 7¢ per fm.; in the same level north we are still driving in kilaas by the side of the lode. In the 150 south it is 2½ ft. wide, and worth 10¢ per fathom. The lode and the shaft are owned by Mr. T. S. Sowers, Oct. 5: a parcel of crops (see account) 89 tons, to Mr. T. S. Sowers, at 24¢ 7/8, 5¢, per ton.



**WHEAL UNITY.**—J. Vivian, Sept. 26: The lode in the flat-rod shaft is 2 ft. wide, very kindly in appearance, and producing good stages of copper ore. The lode in the 30 west is 2 ft. wide, and opening tribute ground. The rise in the same level east is held, and we have again resumed driving the end east, where the lode is 18 in. wide, worth from 34 to 62 per fathom. In the 19 east the lode is 2½ ft. wide, composed of iron, gossan, and spar. The lode in Maria engine-shaft is 2½ ft. wide, very kindly in appearance, and producing malleable copper and grey copper ore. In the 10, east of Maria engine-shaft, the lode is 2½ ft. wide, composed of spar, peach, gossan, and a little copper. In the 10, east of Maria engine-shaft, the lode is 2½ ft. wide, kindly in appearance, and producing a small quantity of copper ore. The shaft east of Maria engine-shaft is held to the adit. The engine and flat-rod are working very well, and the work of the mine is progressing favourably.

**WHEAL UNION.**—T. Glanville, Oct. 6: The lode in the 20, west of the engine-shaft, is 4 ft. wide, with a kindly appearance, producing good ore throughout. The lode in the 15 is 2 ft. wide, yielding stones of ore.

**WHEAL WREY CONSOLS.**—P. Cymon, jun., Wm. Hancock, R. Rockilly, Oct. 8: The summer are engaged cutting a pit in the 64. The lode in the 34 south is 2 ft. wide, producing 8 cwt. of lead per fm. In the same level north it is 2½ ft. wide, producing 7 cwt. of lead per fm.; in the same level north it is 2½ ft. wide, producing 8 cwt. of lead per fm.; in a winze sinking under this level south it is 3 ft. wide, producing 8 cwt. of lead per fm. In the 33 north it is 1½ ft. wide, producing 4 cwt. of lead per fm.; in a winze sinking under this level south it is 2½ ft. wide, producing 12 cwt. of lead per fm. The north shaft is sunk 3 fms. under the 33, where the lode is 3 feet wide, producing 4 cwt. of lead per fm. The stopes and pits are producing much as usual.

**WHEAL ZION.**—J. T. Phillips, Oct. 6: The north lode in the rise in the back of the 50 fm. level is about 18 in. wide—a leader of muddle and peach, about 1 ft. wide, on the north side, and on the south a leader of ore work, turning out 1 ton to the fm. The 68 fm. level is being driven north by three men and three boys, at 4½ per fm. on the cross-course to the west of the engine-shaft, and expect to cut the lode in 16 fms. driving. We have nothing new to report on the main lode. In the Glabe adit we have driven through the lookan that runs to the north of the main lode.

**WILLOW BANK.**—J. Sanders, Oct. 5: In the 30 east there is a little improvement; the lode is producing spots of lead ore occasionally, but not sufficient to value as yet, although there is every prospect of a further improvement. All other parts of the mine are much the same as last reported.

**DEVON BURRA BURRA.**—J. Lord, Oct. 5: The shaft has been taken by six men, at 10s. per fm. We are getting the sinking-lift in its place to-day, and shall get everything to rights so that the shaftmen may sink to-morrow. The eastern end and the stope are without material alteration since my last.

**GREAT SHEBA.**—J. Spargo, Oct. 8: Our sampling this time is small, computed 66 tons (though I think when weighed it will come to 100). This is in consequence of the tributors driving and holding a piece of ground for advantage, but we shall make it up in our next sampling. We shall now commence taking down the lode at Kelly Hole, which I hope will turn out satisfactorily; indeed, I have not the least doubt of it. We have plenty of water.

The letter of "Common Sense," on the case of "Stockwell's Jeffrey and Lord Charles Pelham Clinton," reaching us only on the eve of publication, is necessarily postponed: in our next Journal it shall receive every attention.

### THE MINERAL WEALTH OF THE UNITED KINGDOM.

Availing ourselves of the valuable statistical information prepared by Mr. ROBERT HUNT for the Museum of Practical Geology, we append a concise general view of the present condition, and of the progress during the past three years, of that great source of our national wealth—the produce of our Mineral Industries.

**TIN.**—In 1854, the mines of Devon and Cornwall produced of tin ore, commonly called black tin, 8747 tons; in 1855, 8947 tons; and in 1856, 9350 tons. Thus we find an increased production of 603 tons in 1856 over that of 1854:—

In 1854, at the average price per ton of 64½, the ore produced 559,806½.  
In 1855, " " " " 64½, " 608,396½.  
In 1856, " " " " 71½, " 663,350½.

The mean average prices of Metallic Tin have within the same periods varied as follows:—In 1854, 115½. 10s.; in 1855, 120s.; in 1856, 134½. 13s.

From the high price of this metal there has naturally been considerable activity in the tin mining districts. Many mines which are, under those circumstances, now worked at a profit, would be unable to meet their heavy expenses should any considerable reduction take place; but the demand for this useful metal is too great at present to render this probable.

Our importations of Tin have also greatly increased.

In 1854, of tin in blocks, ingots, &c., we imported 2251 tons.  
In 1855, " " " " 1612 " "  
In 1856, " " " " 3464 " "  
And of regulus, " " " " 749 " "

**COPPER.**—The quantities of metallic copper produced from the mines of the United Kingdom in the last three years were as follows:—

1854. 1855. 1856.  
Cornwall and Devonshire .....Tons 11,979 12,578 13,533  
Sold at Swansea 1,345 1,275 1,345  
Purchased by private contract 6,493 7,440 9,479  
Total 19,717 21,294 24,357

The fine copper, in 1856, being the produce of 278,792 tons of copper ore, obtained from the mines of Great Britain and Ireland, the money value of the ore being 1,744,516½.

This exhibits, in 1856, an increase in our production of copper of 2963 tons over that produced in 1855, and of 4540 more than the quantity yielded in 1854. In the same periods, the proportion of copper produced at Swansea, from the foreign and colonial ores sold at the public ticketings at that port, have been respectively—1854, 3455 tons; 1855, 4650 tons; 1856, 4837 tons. The money value of the copper produced at our British smelting works being, in 1854, 2,331,804½; 1855, 2,867,207½; 1856, 2,846,803½. The mean average market price of the several varieties of metallic copper being, in 1855, 130½. 6d.; and in 1856, 125½.

**LEAD AND SILVER.**—More than 400 lead mines sold lead ore during the year. The produce of the mines of the United Kingdom in 1856, and the two preceding years, was as follows:—1854, metallic lead, 61,005 tons; 1855, metallic lead, 73,091 tons; 1856, 73,129 tons. It will be seen that there has been a very uniform rate of production of lead from the British mines, but at the same time our importations of this metal have been larger than they were in 1855, when we imported 7246 tons of lead, the quantity received in 1856 being 10,254 tons. This is still less, however, than the imports of 1853 and 1854, which were respectively 17,564 tons and 11,858 tons. The mean average prices per ton of lead ore, as deduced from the public sales, were—In 1855, 14½. 4s. 6d.; in 1856, 14½. 8s.; the money value of the lead ore sold in 1855 being 1,311,971½, that of 1856, or 1,01,997 tons, being 1,431,509½. The mean average price of pig-lead in 1855 was 23½. 3s. per ton, and in 1856 it was 24½. per ton. The actual market value of the lead smelted being, in 1855, 1,692,055½; and in 1856, 1,755,098½, to which must be added the silver extracted, the quantities being in the last three years as follows:—

1854 .....Oz. 562,630 .....Value, £140,666  
1855 .....561,906 .....140,476  
1856 .....614,189 .....153,547

In 1855 we imported 7222 tons of silver ore, producing 2,112,246 ozs. of silver; and in 1856, 6636 tons, which gave 1,748,735 ozs. of that metal.

**ZINC.**—From the small demand for English zinc ores, comparatively limited quantities were raised for many years. The sulphides of zinc have become more valuable, and hence they have been raised and sold in larger quantities than they have been for many previous years, 9003 tons being sold in 1856, producing 27,445½. The importations of zinc have declined. Of spelter, we received in 1853, 23,419 tons; in 1854, 19,683 tons; in 1855, 17,845 tons; and in 1856, 18,213 tons. During last year we exported 3153 tons of British zinc, while in 1855 we only sent out of the country 2516 tons.

**IRON.**—The enormous increase which has taken place in our iron manufacture will be seen upon reference to these returns. The returns of iron ore are far more complete than those which have been given in any former publication, and they may be regarded as a very close approximation to the real produce of all the iron-producing districts of the United Kingdom. Those returns show that 10,483,309 tons of iron ore have been raised, and that 3,586,377 tons of pig-iron have been produced. Iron ores have sold, according to their respective qualities, at the mines for prices varying from 5s. to 15s. per ton. The mean average price of iron ore, computed from the sales of all the districts, has been 11s. per ton. This will give 5,695,816½. as the value of the iron ore produced in 1856 in Great Britain. The total produce of pig-iron, at the mean average market price, will give a money value equal to 14,545,508½.

**COALS.**—The large development of our iron and other manufactures has naturally led to a considerable increase in the quantity of coals raised. Notwithstanding the great excess of this return in 1854 over any previous computation, I find it greatly exceeding in 1856 even that surprising quantity, the coal produce of the last year amounting to 66,640,450, which,

at the average price of coals at the pit's mouth, gives a money value equal to 16,663,862½. There has been an increase of nearly 1,000,000 tons in our exports to foreign countries, and the quantity of coals sent coastwise is larger than in any former year.

Among the smaller articles of mineral produce, salt, iron pyrites, arsenic, barytes, and fluor-spar, show a much higher value than those substances were generally thought to possess.

Although the returns of building stones have been considerably increased, yet the detailed lists are very far from being perfect. Enough, however, has been done to enable, by careful computation, a tolerably close estimate of the value of these important productions to be made. The difficulty of obtaining returns of the quantities of clay manufactured are so great, that, with the exception of the finer varieties, it appears at present almost impossible to arrive at any approximation of the value of this natural production.

The value of the mineral productions of the United Kingdom has been estimated in the following table upon the principle of taking the mean average price of all the substances at the mine, colliery, or quarry, before any charges for carriage have been made, or cost added for manufacture:—

VALUE OF THE MINERAL PRODUCE OF THE UNITED KINGDOM, 1856.	
TIN ORE .....	£663,850
COPPER ORE .....	2,343,960
LEAD ORE (as sold containing silver) .....	1,431,509
ZINC ORES .....	27,455
IRON PYRITES .....	46,066
ARSENIC .....	1,911
NICKEL AND URANIUM .....	627
IRON ORE .....	5,695,815
COALS .....	16,663,862
SALT .....	553,993
OTHER MINERALS .....	10,000
PORCELAIN AND FIRE-CLAY .....	120,896
Total .....	£27,659,844
BUILDING STONES, estimated on basis of returns and prices given .....	3,042,478
Total .....	£30,602,322
The market value of the manufactured metals has amounted to the following sums:—	
TIN .....	£808,241
COPPER .....	2,846,803
LEAD .....	1,755,096
SILVER .....	153,547
ZINC .....	225,075
PIG-IRON .....	14,545,508
OTHER METALS .....	100,000
Total .....	£20,434,270
OTHER MINERAL PRODUCTS, exclusive of building stones .....	17,348,751
Total .....	£37,783,021

### The Mining Market; Prices of Metals, Ores, &c.

MINERAL MARKET, London, October 9, 1857.

COPPER.		S. & S. d.		FOREIGN STEEL.		Per Ton.	
Copper wire .....	p. lb. 0 1 3½			Swedish, in legs .....	21 10-21 15 0		
ditto tubes .....	" 0 1 4 1½			to arrive .....	21 10-21 15 0		
Sheeting and bolts .....	" 0 1 1½			to arrive .....	21 10-21 15 0		
Bottoms .....	" 0 1 2-1 2½			English, Spring .....	18 0-23 0 0		
Old (Exchange) .....	" 0 1 0			QUICKSILVER .....	p. lb. 2 0		
Best selected .....	p. ton 134 10-135 0			Foreign .....	30 10-31 0 0		
Tough cake .....	" 131 10-132 0			To arrive .....	30 15 0-31 0 0		
File .....	" 131 10-132 0						
South American .....	" 130						
IRON.				SILVER.			
Bars, Welsh, in London .....	8 10-0			In sheets .....	36 0-36 10 0		
ditto, to arrive .....	8 0-8 2 6						
Nail rods .....	8 17 6-9 0 0						
ditto, in London .....	9 5 0-10 0 0						
Bars, ditto .....	9 13 6-10 0 0						
Hoops .....	10 7 6-11 0 0						
Sheet, single .....	11 0 10-11 10 0						
Fig. No. 1, in Wales .....	10 0-10 6 0						
Refined metal, ditto .....	10 0-10 5 0						
Bars, common, ditto .....	7 0-7 5 0						
ditto, railway, ditto .....	7 0-7 5 0						
Fig. No. 1, in Wales .....	10 0-10 6 0						
In stock to arrive .....	15 0-16 0 0						
Pig, No. 1, in Clyde .....	3 0-3 10 0						
ditto, in Tyne and Tees .....	3 11 6-3 15 0						
ditto, forge .....	3 10 0-3 15 0						
Staffordshire Forge Pig .....	4 15 0-5 0 0						
Welsh Forge Pig .....	3 15 0-4 0 0						
LEAD.				TIN-PLATES.			
English Pig .....	23 10-24 10 0			IC Charcoal, 1st quality, p. bx. 1 19 6-2 0 0			
ditto sheet .....	24 15 0-25 0 0			IX Ditto 1st quality .....	2 5 6-2 6 0		
ditto lead .....	26 0-26 5 0			IX Ditto 2d quality .....	2 15 0-1 15 6		
ditto white .....	27 0-28 10 0			IX Ditto 3d quality .....	2 4 0-2 4 6		
ditto patent shot .....	27 0-28 10 0			IX Coke .....	1 14 0-1 15 6		
Spanish, in bond .....	23 0-23 13 0			IX Ditto .....	2 0 0-2 1 6		
American .....	none.			Canada plates .....	p. ton 16 0-16 10 0		
Sales (shots) .....	p. lb. 11½d.-12½d.			In London; 20s. less at the works.			
Wire .....	11½d.-12½d.			Yellow Metal Sheathing .....	p. lb. 11½d.		
Tubes .....	" 11½d.-12½d.			Westerstedt's Pat. Met. ....	p. wt. 2 2 0		
At the works, 1s. to 1s. 6d. per box less.							

**REMARKS.**—Our market continues to manifest a degree of easiness, transactions being mostly effected on terms favourable to buyers; prices generally have a slight tendency to recede, but present appearances do not threaten any material declension. The increased rates of discount, and the Indian mutiny, tend to create depression, and prevent speculators from entering deeply into metals.

**COPPER.**—Although activity no longer prevails, there is still a quiet trade doing; many orders that were given out some time since have yet to be delivered, therefore there is no fear of any immediate decline in the value of this article.

**IRON.**—Rails are to be purchased at 7½. per ton. English bars, also, at 7½. f.o.b. at the works.—specifications are needed by the ironmasters. Scotch pigs have been considerably affected by the advanced rates of discount; the intelligence no sooner reached Glasgow than an immediate fall ensued; mixed numbers changed hands at 65s. 9d. cash, which price was quoted by sellers here on "Change to-day"—No. 1 Calder, 74s., or 85s. ex ship in the Thames.

**LEAD.**—Prices continue easy; sellers, however, quote former rates.

**SILVER.**—No improvement can be said to have taken place in this metal; prices, if anything, have rather tended downwards.

**TIN.**—No change has been announced in fixed rates for English qualities; a moderate business only can be reported. In foreign, nothing of consequence has occurred. Straits is a shade lower.

**TIN-PLATES** remain the same as before.

**QUICKSILVER.**—Contracts have been passed at 2s. per lb.

**LIVERPOOL, Oct. 8.**—The inactivity recently observed in our metal market still exists, and the demand generally is now merely to meet immediate requirements. The increasingly unfavourable intelligence received by the Baltic has excited considerable alarm, and orders previously received, and already in hand, have been countermanded to some extent. An uneasy feeling exists as to the future, augmented by the prospect of dearer money, an additional ½ per cent. in the rate of discount having been declared to-day. Prices of both Welsh and Staffordshire Iron are ranging rather lower, and although there cannot be said to be any very great desire to sell, yet the feeling is favourable to reduced rates, at all events for the present. Scotch Pig-iron shows but little alteration, the fluctuation in prices being but trifling. Business has been exceedingly limited, and as regards speculation it is perfectly at a standstill. The shipments are on an extensive scale, being 12,418 tons, against 10,549 tons for the corresponding week of last year, or an increase of 1869 tons; to this extent of the shipments may be attributed the steadiness of the price, in the absence of ordinary business. Tin shows no alteration; English is in good request, at current rates; foreign is quiet. Tin-plates are to be obtained on favourable terms to the buyer, and there is apparently more anxiety to sell. In Copper, also, a fair amount of business has been done, at full prices. Lead is quiet. The following are the quotations:—Iron: Mer-

The produce of all the sales, excluding foreign ores, but including private contract purchases.

chant bar, 7½. 10s. to 7½. 15s. per ton.—Tin: Common block, 140½. per ton; common bar, 141½; refined block, 144½.—Tin-plates: Charcoal, 10, 38s. to 39s. 6d. per box; coke, 10, 33s. to 34s.—Lead: English sheet, 25½. per ton; English pig, 24½.—Copper: Cake and tile, 12½. 10s. per ton; best selected, 124½. 10s.; sheeting and bolt, 1½. 13d. per lb.—Yellow metal sheathing, 11½d. per lb.—Steel: Blistered, 30½. to 40½. per ton; spring, 18½. to 24½.; cast and sheaf, 50½. to 60½. per ton.

**GLASGOW, Oct. 8.**—Our market continues in a depressed state, in consequence of large lots of iron being forced upon it, combined with the tightness in the money market. To-day, business was done in mixed numbers, warrants, at 66s., at which prices we closed sellers. Shipments have continued good, but the legitimate demand has now fallen off considerably, and stocks are accumulating.

**MINES.**—We have often remarked that when business is dull in the stock and railway markets, mines are particularly active; and this week, while the news from America of bank failures and mercantile difficulties, has caused an advance in discounts, and a general fall in stocks and shares, great excitement has been shown in the mining market, and business more than usually brisk. This has been caused in a great measure by the discovery at East Basset, where the copper lode in the 60 fm. level is yielding 10 tons of rich ore per fathom; on Tuesday, when the discovery was made, the shares in London were 75, sellers, but when it became known on Thursday they rose to 100, 110, and leave off 110 to 120; just a month ago the shares were 60. This rise offers another example of what a discovery in the Basset district affords, and to which we have frequently alluded. East Basset was originally part of Wheal, or South Basset, and was separated from the rest a few years ago, and the shares issued at 5½. per 25th, or 2½. 10s. the present share. Until 1854 little was known of it, and the shares were in few hands, when Mr. J. Y. Watson, in his Review of the Progress of Mining, published in the Mining Journal of Dec. 24 of that year, called public attention to the fact that whilst the three Bassetas, West, South, and North, represented a market value of more than 400,000½., there was a little mine (East Basset) scarcely known, and standing at a market price of 5000½., on the same lode, and which one day might turn out a prize. We have since kept the progress of the mine before the public, and by many have been thought too sanguine; but the result justifies our confidence; and what may appear rather singular is, that the mine was not a favourite with many of the "practicals" in the district, and very few shares are held there. One gentleman, who has supported the mine through good report, and evil report, and purchased shares to a large extent, will now realise a profit of something like 10,000½. At the Basset meeting, the dividend was 5½. per share only, rather causing disappointment, but it was considered by those present that although not looking bright at present, the mine had one or two important points to come off, which might cause an improvement; the south mine is to be worked separately in future; shares are rather flat, at 210. South Frances have been more in request, at 230 to 240, and but for the dispute with West Basset would rise. Copper Hill, adjoining East Basset, has also greatly improved at boundary shaft, where Paddon's, or the main Basset lode, is worth 50½. per fm., and shares have advanced to 230 each. West Basset also better; buyers at 25. North Basset remain at 16 to 18½. Wheal Grenville shares have been firmer, and more in demand, since the discovery at East Basset, the lode even at the present shallow depth being interspersed with the same kind of black ore; shares, 1½. to 1½. Alfred Consols have fluctuated from 13 to 14, leaving off at 12½ to 13½; the dividend at the meeting was 4s. per share. Great Alfred shares have been flat, at 5½ to 6½; but as a course of ore is daily expected in the 180, it is not improbable that a sudden rise may take place one of these days. North Frances, 13½ to 14; East Alfred, after being flat, improved, and left off at 3½ to 3½; Margaret shares, early in the week, were 65 to 67½, but left off 61, sellers; Margery, 11 to 12; Herodfoot, 7½ to 8; Pendean, 2½ to 2½; Holmbush, 1½ to 2; Redmoor, 4½ to 5; Kelly Bray, 1½ to 1½; Lady Bertha dropped from 25s. to 18s., but left off at 19s. 6d. to 20s. 6d.; Sortridge Consols have been in good demand, and left off at 2½ to 2½; East Russell also improved to 2½; Hington Down not quite so firm, at 5½ to 6, but there is an impression shares will be much better in a few months; Trelawny have been in good request, and owing to a discovery the price advanced to 26; South Caradon, 340 to 345; Wheal Kitty (Lolant), 22 to 22½, but not much doing; Mary Ann, 47 to 48; Grambler and St. Aubyn, 75 to 80; Great South Tolgu, 16½ to 17; Wheal Harriett shares, consequent on an improvement, have been again in demand, at 2½ to 2½; Gawton United, 21s. to 23s. 6d. Great Badden, 2½ to 1; these shares, from the state of the mine, would seem to be worth more attention. Pedan-drea, 1 to 1½; West Par, 4 to 4½; South Carn Brea, 5½ to 6; Wheal Edward, 9 to 9½, and quiet; Vale of Towry, 2½; North Roakear, 140, 145, and not much doing; Wheal Uly, 2½ to 3, and more business doing in them; Tincroft, 4½. Treveltha, 1½; the mine is looking better in the 60; Camborn Vein, 5 to 5½; North Croftly have advanced from 4 to 4½, 5½; East Rosewarne, 16s. to 17s. 6d.; South Condurrow, 3s. to 4s.; Stray Park, 4½; West Frances, 18, 20; West Caradon, 120; West Soton, 350.

**Mining Exchange Official List of transactions during the week:—**

**SATURDAY, Oct. 3.**—Pedan-drea, 10s. to 11s.; Pendean, 2½ to 2½; Sortridge Consols, 23½ to 24½; Vale of Towry, 2½ to 2½; Wheal Edward, 9 to 9½; Wheal Margaret, 65 to 67½; Wheal Trelawny, 24 to 25; Wheal Zion, 19s. to 21s.  
**MONDAY.**—East Alfred, 3½ to 3½; East Basset, 75 to 77½; Redmoor, 4½ to 5; Sortridge Consols, 23½ to 24½; South Caradon, 337½ to 347½, ex div.; South Carn Brea, 6 to 6½; Wheal Grenville, 20s. to 31s.; Wheal Trelawny, 24½ to 25½.  
**TUESDAY.**—East Alfred, 3½ to 3½; East Basset, 75 to 80; Gawton United, 22s. 6d. to 23s. 6d.; Great Badden, 15s. 6d. to 17s. 6d.; Hington Down, 5½ to 6; Lady Bertha, 18s. 6d. to 19s. 6d.; Pendean, 2½ to 2½; Redmoor, 4½ to 5; Sortridge Consols, 23½ to 24½; Wheal Grenville, 20s. to 31s.; Wheal Harriett, 13s. 6d. to 15s.; Wheal Trelawny, 25 to 26.  
**WEDNESDAY.**—Alfred Consols, 13½ to 14; Calstock Consols, 6 to 6½; Copper Hill, 220 to 225; East Alfred, 3½ to 3½; East Basset, 100 to 110; East Russell, 2 to 2½; Lady Bertha, 19s. to 20s.; North Basset, 15½ to 16; Redmoor, 4½ to 5; Sortridge Consols, 2½ to 2½; Wheal Grenville, 1½ to 1½; Wheal Harriett, 12s. 6d. to 13s. 6d.; Wheal Trelawny, 25 to 26.  
**THURSDAY.**—Alfred Consols, 13½ to 13½; North Wheal Basset, 16; North Wheal Croftly, 5 to 5½; Sortridge Consols, 2½ to 2½; Wheal Mary Ann, 47½ to 48; St. John del Rey, 13½ to 13½; General, 17½ to 17.  
**FRIDAY.**—Alfred Consols, 14, 13½; North Wheal Croftly, 4½ to 5½; Sortridge Consols, 2½ to 2½; Wheal Edward, 9; St. John del Rey, 13½ to 13½; United Mexican, 3½.

On the Stock Exchange, the following business has been transacted:—  
**SATURDAY, Oct. 3.**—Alfred Consols, 13½ to 13½; United Mexican, 4.  
**MONDAY.**—Alfred Consols, 13½; Par Consols,







# THE PROGRESS OF MINING IN 1856.

BEING THE THIRTEENTH ANNUAL REVIEW.

By J. Y. WATSON, F.G.S., Author of the *Compendium of British Mining* (published in 1845), *Gleanings among Mines and Miners*, &c.

The THIRTEENTH ANNUAL REVIEW OF MINING PROGRESS appeared in a SUPPLEMENTAL SHEET to the MINING JOURNAL of Jan. 3, 1857.

A FEW COPIES OF THE REVIEW OF 1855, containing Statistics of the Metal Trade, the Dividends and Per centage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also, a FEW COPIES OF THE REVIEW OF 1852, 1853, and 1854. MAY BE HAD ON APPLICATION at Messrs. WATSON and CURELL'S Mining Office, 1, St. Michael's-alley, Cornhill, London.

Also, STATISTICS OF THE MINING INTEREST. By W. H. CURELL.

**WATSON AND CURELL'S MINING CIRCULAR.** Published every Thursday morning, price 6d., or 1s. per annum, contains Special Reports of Mines, and the Latest Intelligence from the Mining Districts, from an exclusive resident agent; also, Special Recommendations and Advice upon all subjects connected with Mining, and interesting to investors and speculators. A Record of Daily Transactions in the Share Market, Metal Sales, and General Share Lists, &c. Edited by J. Y. WATSON, F.G.S., and published by WATSON and CURELL, 1, St. Michael's-alley, Cornhill.

N.B. Looking at the causes for the present depression in mining shares, Messrs. WATSON and CURELL have made a selection of a few dividend and progressive mines to pay good interest, with a probability, also, of a rise in value, the names and particulars of which will be furnished on application.

## INVESTMENTS IN BRITISH MINES.

MR. MURCHISON'S REVIEW OF BRITISH MINING for the QUARTER ENDING 30th June, 1857, with Particulars of the Position and Prospects of the principal Dividend and Progressive Mines, Tables of the Dividends paid in the past Quarter, and in the Years 1855 and 1856, and a MAP of the GREAT WHEAL VOR and LELANT MINING DISTRICTS, &c., is now ready, price 1s.; at Mr. MURCHISON'S office, 117, Bishopsgate-street Within, London.

Reliable information and advice will at any time be given on application.

Also, COPIES OF "BRITISH MINES CONSIDERED AS AN INVESTMENT." By J. H. MURCHISON, Esq., F.G.S., F.S.S. Pp. 356, boards, price 3s. 6d., by post 4s. See advertisement in another column.

## CORNISH AND DEVON MINING ENTERPRISE.

By R. TARDINICK, Mining Sharebroker, Gresham House, Old Broad-street, London.

Facts and Statistics recorded, Synopsis of Dividend Mines, Plan of the Buller and Basset District, a Clear and Succinct Description of the chief Mines. All interested in such investments should possess a copy. Price 5s. bound.

## ST. IVES, LELANT, AND TOWEDNACK MINING DISTRICT.

MR. FRETWELL'S REVIEW of the position and prospects of the mines in the above DISTRICT, and a STATISTICAL ACCOUNT thereof for the past 30 years, is NOW READY, and will immediately be sent to any party who may require a copy, on the receipt of 10 postage stamps.

Dated 10th Lelant, Hayle, Aug. 7, 1857.

Just published, in crown 8vo., cloth, illustrated by Wood Engravings, price 6s.

## RECORDS OF MINING AND METALLURGY.

OR, FACTS AND MEMORANDA, for the Use of Mine Agents and Smelters.

By J. ARTHUR PHILLIPS and JOHN DARLINGTON. London: E. and F. N. Spon, No. 16, Bucklersbury.

NEW VOLUME.—PUBLISHED THIS DAY.

Royal 8vo., half calf, with Numerous Illustrations, price 21s. per volume.

## TRANSACTIONS OF THE NORTH OF ENGLAND INSTITUTE OF MINING ENGINEERS.

FIVE VOLUMES of the TRANSACTIONS of this SOCIETY are NOW READY, and comprise a series of most important and highly valuable papers, read by Members of the Institute; illustrated with Lithographed Plans, Diagrams, Sections, &c. Vol. V. comprises papers by Mr. Potter, on Marston Mining; Mr. Wood (President), on Loughborough; Mr. Marley, on the Cleveland Ironstone (an exceedingly valuable paper), &c. This is probably the most valuable volume which has yet appeared.

London: Published for the Institution at the *Mining Journal* office, No. 26, Fleet-street, London, where the volumes can be had, together or separate.

## HOPTON'S PLANS FOR VENTILATION OF COLLIERIES.

showing separated Winds, that will prevent all Serious Explosions in Coal Mines. On the same sheet, the Works and Ventilation of the Lund Hill Colliery are represented.

May be had at the *Mining Journal* office, 26, Fleet-street, London.

A notice of Mr. Hopton's invention appeared in the *Mining Journal* of 20th June.

## PATENTS, SEVERAL THOUSAND: A CLASSIFIED CATALOGUE OF SUBJECTS; with

"ADVICE TO INVENTORS ON PATENTS, CAPITAL, AND CONTRACTS."

Post free.

H. DRACKS, C.E., Patent Agency Office (Established 20 years), 32, Moorgate-street, City.

## COMPULSORY REGISTRATION OF JOINT-STOCK COMPANIES.

Now ready, price 4s., the Second Edition of

## TAPPING'S EXPOSITION OF THE JOINT-STOCK COMPANIES ACTS OF 1856 AND 1857.

Designed as a PRACTICAL GUIDE for the Promoters, Directors, Shareholders, Solicitors, Secretaries, Officers, and Creditors of all kinds of Joint-Stock Companies.

Containing a Clear Exposition of the recently passed JOINT-STOCK COMPANIES ACT, 1857.

Also, full Directions for the Formation, Registration, and Incorporation, of Joint-Stock Companies, together with the Authorised Regulations for Management of the same, and all necessary forms.

By THOMAS TAPPING, Esq., Barrister-at-Law.

Author of the "Readin' Priss Essay on the Cost-Book System," &c., &c. London: *Mining Journal* office, 26, Fleet-street, and all booksellers.

## Notices to Correspondents.

\* Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

## RATING OF MINES.

The session has been some time over, and I, as well as many others, have been in expectation of some emanation of opinion from the "Miners' Committee" appointed last year. I had certainly thought that, under all circumstances, they would have felt it but just to issue to the mining community a report of their views on the evidence adduced before the committee of the House of Commons. Nothing was done prior to the last meeting of the session, and I presume that this present recess will be dawdled away in the same unprofitable manner.

No account has been rendered of the funds that have been collected. An apologist for their inertia during the session stated that they were waiting to see what the committee would do; and as soon as they received their report, then their time would come for action. It has arrived. What are they now doing? I give them his answer—"Thinking, but not setting."—PICK AND GAD: Oct. 5.

## MINING IN IRELAND.

Having seen a paragraph in the *Journal* of the 3d inst., stating that the Coombe Mine (Schnill Bay) was about to be worked under my management, I beg to observe that if my correspondent had stated a steam-engine for pumping instead of a steam-pump (which I suppose to be a new invention) was required to drain the mine of water, he would have been right. I will thank you to insert this note in the next *Journal*.—W. THOMAS: Oct. 5.

## TICKETING DINNERS EXPENSES.

I am right glad to see that somebody is found to "bell the cat" about samplers' charges and ticketing dinner expenses, as they are really too bad. At the last ticketing at Pool, only two horses were in the stable, yet the charge in the bill was no less than two guineas—about the value of the horses themselves. Now, if the landlord could only have a few horses like these every day, he would indeed have a rich mine. Then, the other charges were pretty much the same, though not so barefaced. I hope, sir, you will continue to publish such facts, and endeavor to modify this evil. But the samplers' fees are even worse than the horse charges—they are far more expensive creatures than the poor bay-and-corn-eating and water-drinking animals. They prefer a good beefsteak and bottle of porter, with glass of grog, when they come to the mine—aye, and get it, too, or else we get black looks. Where adventurers are particular about count-house expenses, we frequently have to pay for it out of our own pockets; and when we are screwed down to 6d. a month, we can ill afford to entertain these gentry, and their horses, too. We would do so willingly, if we could charge a guinea a head, as they do at ticketings.—A MINE CAPTAIN: Redruth, Oct. 6.

## BRITISH AUSTRALIAN GOLD MINING COMPANY.

I presume, from there being an office and a secretary, that there is still some little to divide. It is useless to imagine that we shall ever obtain anything from the other side: would it not be more prudent at once to wind-up, and distribute what little there yet remains among the shareholders? I am aware that this can be but a mere trifle. I am induced to propose this, as, while there are some funds in hand, we may then be able to arrive at what the liabilities of the company are. In many instances, when all the capital is expended, the directors who have mismanaged the property generally modestly ask for contributions to pay up the debts incurred.—K.: Oct. 6.

## BOB ACCORD COMPANY.

What steps have this company taken as to the appointment of their officers; and what machinery, if any, has been sent out? It is only right to the shareholders that they should be advised as to progress made.—A SUBSCRIBER.

## ANGLO-CALIFORNIAN GOLD MINING COMPANY.

It appears that the directors and liquidators of this defunct company have conspired, and that the former intend, on payment of the sum of 3s. per share, to guarantee the shareholders against any further liability. I would enquire whether, at the meeting, when the property was transferred to them, did they not do the same? Had the Californian Quartz Consolidated Company never been formed, should we have heard of any claims upon us? I do not. The great question to be settled is this—some one must discharge the liabilities, but it is difficult for laymen to decide who these are. Mr. Coombe and his section are of opinion that it should be the directors. He is a solicitor—so is one of the liquidators; while in the direction we have two barristers, one a conveyancer, and the other practising at the common law bar. Surely, with all this legal array, some definite and correct solution should be arrived at. It appears, however, that at last we are to persevere in our account. Every year a balance-sheet was sent before us, and amounts were charged for mining expenses, &c., in California: Capt. Davies, of Chacewater, who was there some time with Sir H. Huntley, has stated that, at the period he left, not more than 100l. had been expended on legitimate mining, although the shareholders here had been debited with some thousands.

I hope we shall have the vouchers for travelling expenses, horses used for purposes of pleasure, and the hotel bill at San Francisco, together with Sir Henry Huntley's two useless and expensive journeys, all enumerated, so that an opinion may be arrived at as to how the money was squandered on the other side, in addition to the mode in which it was frittered away here.—LEWIS: Oct. 3.

## GLOSSARY OF MINING TERMS.

The last edition of our *Glossary of British and Foreign Mining and Smelting Terms* being now entirely exhausted, we intend to publish a new one, and should therefore feel obliged for any corrections or additions which our correspondents may supply. We shall endeavor to render the treatise even more worthy of the support which has been so liberally accorded to it than heretofore, by the careful revision of the whole, and the insertion of such other terms as have come under our notice since we last published.

**MIXON CONSOLS.**—"C. D." should apply to the office, St. George's-chambers, New-street, Birmingham, for the particulars he requires. We invariably publish all the information forwarded. If the amount stated to be paid on the shares be incorrect, why not send the correct sum?

**MANUFACTURE OF STEEL.**—Some time since, much interest was excited by the invention of Capt. Uchatius, for converting pig-iron into cast-steel by such an economic process, that the market value of steel was to be further reduced considerably. Experiments were made with, apparently, all the success that could be hoped for; and it has since been reported in your *Journal*, that the Ebbw Vale Company had taken steps to carry out the invention on a very large scale. You have stated that the furnaces were built, and everything ready for operation; and also that the difficulty encountered in treating the ordinary coke iron produced in this country had been entirely overcome, yet, since the period when this last announcement was made, nothing has been heard of Mr. Lees (Capt. Uchatius's partner, who was the sole agent in England), or of the progress made at the Ebbw Vale Works. Is anything being done to develop the invention, or has it turned out to be one of those deceptive schemes which are only brought before the public to enrich the inventors? Is the invention worthy of being classed with those of Cort, Neilson, and other kindred geniuses; or is it only fit for condemning to the fate which has justly attended the propositions of Berdan, Martineau, and Bessmer? As Messrs. Krefelt, of the Mecklenburg Consulate, were identified with Uchatius's invention, I should think they could have no objection to publishing some particulars as to the state of affairs, when a process which has been so highly lauded on all sides proves a failure, a certain amount of discredit attaches to all concerned, unless satisfactory explanation be given.—H. K.: City, Oct. 6.

**VENTILATION OF MINES.**—As we have now had the views, both of Mr. Hopton and Mr. Wales, clearly set forth, practical men can have no difficulty in forming an opinion as to the relative merits of the inventions. To Theoreticalists connected with coal mining, I am sure any discussion between practical men would be read with great interest, as they feel all the responsibility which attaches to them, and at the same time are aware that they have not much power to remedy the evils.—J. F.

**"S. T. W." (Workington).**—The parties engaged to superintend works either in foreign countries or the colonies are generally supposed to be men of superior intelligence, and possessed of higher capabilities than the average operatives. In general, companies, when they require the service of such persons, advertise for them; the principal man, or foreman, usually selects those who are to form his staff, and can out the undertaking. The mechanical and rough part of the labour, which does not necessitate any great skill, in nearly every instance is performed by native hands. It is not, however, always the rule that the most competent men are appointed; much depends upon interest, favoritism, and other circumstances, which may, in a good many instances, be controlled by unseen influences.

**ROBERT COAL COMPANY.**—"E. T." (Brighton).—The meeting will be held in Paris on Monday. The company may be considered private, as several attempts have been made to establish it in this country without success, but information can be obtained at 31, Threadneedle-street.

**COAL PITS, WELLS, AND MINE SHAFING, &c.**—I have read the observations made by "J. W." and all I can say is, that if he, or any other gentleman possessing means, thinks any of my inventions deserves encouragement beyond that of others, I shall be grateful and obliged by supplying him with copies of such selected objects. But it is hard to bind me down to one single line or suggestion, and if I had but one such to offer what merit or credit could I take as an inventor? "J. W." says, "There is a place for everything." This is so broad a fact that it is indisputable; but how to get the right things into the right places is the difficulty; and it is so with men as well as mechanical inventions. Give me the opportunity to place my blocks at work in the under-shore tunnels, as sewage channels for the Thames or London sewage waters, and I will prove that the embanked wallings over, and the conversion of the sewage into useful manure (by Collins's patent chemicals) are feasible, and are all ready to be put together, if any real good is to be done. I will then show him that indurated stone or blocks of indurated concrete and blue bricks, are (although not my invention) the materials I would recommend and adopt for the construction of sewer works, &c.; so that one and all of the supposed varying objects of my conversation with him are concentrated in one great end and purpose, and are necessary to each other, and that no real men of business will find fault with proper explanations, if they have only the patience to listen to a plain statement of facts. Another fearful accident, and loss of four lives, by collapse of a brick-lined shaft, near Manchester, during the past week, only proves the dire necessity of immediate and proper remedies for these constantly occurring evils, which are destroying lives and property, and filling our Unions with paper families. I trust my remedy, or a better, if it can be found, will be rigidly enforced.—W. AUSTIN, C.E.: Oct. 5.

**ST. JOHN DEL REY MINING COMPANY.**—"F. C." (Windsor).—The improvement in these shares may be accounted for from the fact that it is considered they have got over their past difficulties; and, according to the last advices, the profit for July was 50l. 11s. 5d.—the loss for June was 191l. 14s. 7d.

**TREATMENT OF COPPER ORE.**—In reporting the meeting of the shareholders of the Arundell Copper Mine, you stated that a process invented by Mr. Reid was described, and certain proposals made for testing the practical value of the invention for treating the poor ores produced at the Arundell Mine. Now, as at the present time poor ores only are raised, and those in but comparatively small quantities, the value of such an invention must be apparent to those who have to pay calls for working the mine, and defraying the legal expenses incurred by the gentlemen at the head of our affairs; but, as far as I recollect, the report published in your last *Journal* as nearly as possible corresponds with one which you inserted many months since, with the exception that Mr. Reid's name has been substituted for that of Mr. Bursill's. If the mine is really to be worked, would it not be advisable to wind-up the present company altogether, and found a new one under the Limited Liability Act, to properly develop the mine?—AN OLD SHAREHOLDER: Oct. 6.

**MEXICAN AND SOUTH AMERICAN COMPANY.**—We have reason to believe that every information in connection with the affairs of this undertaking can be obtained of the secretary. "A Shareholder," and other correspondents who have addressed us, had, therefore, better apply to the office.

**MINING IN THE ALPS.**—We had some short time since several announcements made, through your *Journal*, that immense fortunes were to be realized by embarking in mining enterprises in the Alps; but upon these being a probability of a discussion between Messrs. Baglion and Maligny, the enterprise rapidly sank into oblivion. Probably, by their each knowing the district and position of the mines well, it was feared that they might impart too much of their knowledge to the public, and thus spoil the chance of again bringing the similar adventures forward as a channel for unthinking capitalists to invest their money in. This is, of course, the opinion entertained by those who have only published facts to draw their conclusions from. Those interested should take steps to remove such impressions, especially if, as I have learned from other sources it is, the property is really not only valuable, but of extraordinary promise.—G. R.: Paris, Oct. 7.

**"R. D." (Wales).**—The district in which the Caradon Mines are situated is Liskeard, there are no other mines of the same denomination in the county. Our correspondent probably has been mistaken in the name of the locality. Reports of the different mines will be found under their several heads.

**ASTORIA MINING COMPANY.**—We are told that at the end of September Senor de Grimaldi would forward the remaining instalment due to the shareholders of this unfortunate association. I had expected to have seen a notice to this effect, or that Mr. Kenneth Mackenzie, the liquidator, would have made some announcement, informing us why it was further deferred. Judge my surprise, on enquiring at his office, to hear that he is in Scotland. It is incumbent that every Caledonian should, like Lord Penruddock, go to the moor and shoot grouse, while their unfortunate clients are waiting their pleasure! This matter ought long since to have been settled, and I trust that as the time now more than elapses, the liquidators will take such energetic steps as will not allow us to be further defrauded of the miserable instalment of the magnificent property of which we have been deprived.—M. F.: Oct. 8.

**LIANES LEAD MINING COMPANY.**—"G. H." (Devonport).—In consequence of the falling off in the supply of fuel at Lianes, it is intended to erect new smelting works near the city of Cordova, as several coal fields are in the immediate vicinity. The railway from Seville to Cordova is nearly completed.

**THE ALLEGED FRAUD.**—I perfectly agree with your remarks that the late exposure at the Mansion House must tend to inflict no inconsiderable amount of injury on mining in general. No person likes to have his private affairs dragged into a public court of justice, nor is it pleasant to let the world know how one has been victimized. Individuals may pay heavy rates for accommodation, and are sometimes compelled by the force of circumstances to come in contact with people of questionable character, but I believe the late exhibition is the first on record of any one, merely to gratify the malicious curiosity of the public, or to support his own statement to heap contempt and obloquy on himself.—CORNHILL, Oct. 6.

**THE ALLEGED FRAUD.**—We have received several communications on this subject, many of the following in each short terms on the conduct of the plaintiff in their insertion was inadmissible, and could tend to no other purpose than that of fostering an injurious and irritable feeling. The highest tribunal in the City has decided that Mr. Stockwell was guilty of an error in bringing the charge of conspiracy against Lord Clinton and Mr. Jeffrey. There was no defence offered, and the plaintiff was adjudged by his own evidence. There are few individuals who would voluntarily prefer undergoing such an ordeal as that which Mr. Stockwell passed through in the witness-box. In our remarks, we stated this was one of those cases which, happily, were but for a moment, and that brokers could be bound who transacted business in a fair and equitable manner. We admit, with "Semper Fidelis," that among mining brokers, as well as in other professions, there are to be found black sheep; but it is a great injustice that a respectable body of men should be accused, because some individuals have been guilty of faults of commission and omission. The circumstances attending this affair were of a peculiar nature, and more particularly concerning the one mine—Wheal Zion. One person cannot be charged with conspiracy; it was necessary, for an object, there should be two, and hence Lord Clinton's name was unjustifiably brought into question. Mr. Siegh stated at the Mansion House that the case, and the reasons there, and we must, therefore, presume that in another court the late defendants will obtain the redress their suit demands. We cannot help thinking that Mr. Stockwell was very ill-judged and ill advised in bringing the case before the public; hitherto it has not recommended very much to his credit. He will now be the defendant in a civil action, and further discussion would be useless and premature until that is decided. We again repeat our regret that such an affair should have occurred to bring disrepute upon mining; but, at the same time, we must express our opinion that this singular and unprecedented circumstance ought not to depress mineral enterprise.

**"A. R. G." (Dolbenham).**—The secretary of the Bombay, Baroda, and Central India is Mr. Charles Kennedy; East India, Alderman's-walk, Mr. D. L. Noss; Madras, 33, Broad-street, J. Walker. There are several projected railways for India, but I am questionable now, under the present aspect of affairs, when they will be carried out. The offices of the Calcutta and South-Eastern Railway are at 7, New Broad-street, E.C. The secretary is Mr. George Poynts Stoddard.

**WALKER GOLD MINING COMPANY.**—A disappointed speculator complains that he has written several letters to the secretary, who has never vouchsafed to answer them. He further states that the only person to be seen at the office was a boy, who was minding them, but who could give him no information of the prospects of the company. Our endeavors have been equally as fruitless on other occasions; a letter to the Chairman might be answered. Gold mining companies in general have different mode of transacting business to other associations; this is generally practiced, although it is totally uncommercial.

**PROGRESSIVE MINES.**—In compliance with the expressed wish of several correspondents, it is our purpose occasionally to offer some remarks, derived from authentic information, on the prospects of those properties which are not dividend-paying, but considered as progressing thereto. It is not our intention to be in any way vindictive; our course will be guided by circumstances as they occur, and we shall notice those mines which appear at the period to possess the greatest interest with the mining public. By so doing, we hope to be enabled to aid the cause of legitimate mining enterprise, and we trust this may be one of the means, trifling though it may possibly seem, which will in some degree help to remove the stigma which has been cast upon mining adventure by the ill-advised conduct of some of those connected with it.

**MINING BROKERS.**—"A Cornishman" is of opinion that if those interested in mining in London were to employ competent agents in the county, they would obtain reports on which they could rely. Many of the brokers, he states, ought to be called "mine breakers." He then alludes to a recent case which has excited some attention, and would seem to infer that all men who transact business in mines follow the same manner of proceeding. We have stated this was not the rule, but a literary exception. We have always advised those embarking in mining enterprises to use caution, and see that they are dealing with respectable persons and men of character. Shareholders should either attend meetings in person or by proxy; in general they neglect this. As long as dividends are declared they pay no attention to the property; it is only when a call is made they begin to look after their interests, and complain of errors, which a little vigilance on their part would have probably obviated, if it could not have been effectually remedied.

# THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, OCTOBER 10, 1857.

We have ever urged the vast importance of statistical information to the mining community, and it is with considerable pleasure we refer to the returns published in another column of this day's *Journal*. Ten years since, returns were issued from the Mining Record Office, and we are glad to find that now Mr. ROBERT HUNT, to whose indefatigable exertions may be attributed the happy result which has been arrived at, is enabled, in the mineral statistics for 1856, to embrace every important branch of our mineral industries. The enquiry has reached a stage of completeness which allows this to be done with a degree of correctness not hitherto attained; and the relative value of our mineral productions in 1856, and two preceding years, can be satisfactorily estimated.

In 1854 the Devon and Cornish tin mines produced black tin to the extent of 8747 tons, which in 1855 had increased to 8947 tons, and in 1856 to 9350, being 603 tons more in 1856 than in 1854. The rise in the price of tin within the same period, of course, caused more than a corresponding rise, the estimated rise being—in 1854, 559, 508l.; and in 1856, 663, 850l. From the high price of the metal, there has naturally been considerable activity in the tin mining districts. The importations of tin have also greatly increased.

The copper mines of the United Kingdom produced of metallic copper 19,717 tons in 1854; 21,295 tons in 1855; and 24,257 tons in 1856. These figures may be considered as almost absolutely correct, since they include the quantities sold at the Cornish and Welsh ticketings, and that purchased by private contract. The fine copper produced in 1856 was obtained from 278,792 tons of copper ore yielded by the mines of Great Britain and Ireland—the money value of the ore being 1,744,516l. This exhibits, in 1856, an increase in our production of copper of 2963 tons over 1855, and of 4540 over 1854. The money value of the copper produced at our British smelting works was 2,330,000l. in 1854; 2,860,000l. in 1855; and 2,840,000l. in 1856. The mean average market price of the several varieties of metal was in 1855, 130l. 5s.; and in 1856, 125l.

During the year under consideration, 400 mines sold lead ore, and the quantity of metal produced was but 40 tons more than in the preceding year; the figures being—73,091 tons for 1855, and 73,129 for 1856. Our importations have, however, been considerably larger in 1856. The money value of the lead ore in 1855 was 1,311,971l., and in 1856, 1,431,500l.—the actual market value of the lead smelted being 1,692,055l. in the former year, and 1,765,096l. in the latter; to this must be added the silver extracted, which in 1854 amounted to 562,659 ozs., worth 140,666l.; in 1855 to 561,906 ozs., worth 140,476l.; and in 1856 to 614,188 ozs., worth 153,547l. In 1855 we imported 7222 tons of silver ore, producing 2,112,246 ozs. of silver; and in 1856, 6636 tons, which gave 1,748,735oz. of metal.

For many years the demand for English zinc ores was very small; but the sulphides having become more valuable, they have been raised and sold in larger quantities, the produce for 1856 being 9003 tons, which yielded 27,445l. The importations of zinc have declined. During the year we exported 3163 tons of British zinc, against 2516 tons in the preceding year. The returns of iron pyrites, arsenic, &c., are far more complete than any hitherto published.

The returns of the produce of the iron mines, which may be considered as a close approximation to the real yield of the iron-producing districts of the United Kingdom, show that 10,483,399 tons of ore have been raised, and that 3,886,377 tons of pig-iron have been produced. The prices which iron ores have realised have varied from 6s. to 15s. per ton, according to quality—the mean average being 11s., which will give 5,695,815l. as the value of the iron ore produced in 1856. The money value of the pig-iron taken at the mean average market price, was about 14,545,500l.

A considerable increase has taken place in the quantity of coal raised; the figures for 1856 being 66,645,450 tons, which was worth at the pit mouth 16,663,862l. There has been an increase of 1,000,000 tons in our export of this mineral, and the quantity sent coastwise is larger than in any former year. Among the smaller articles, salt, iron pyrites, arsenic, barytes, and fluor-spas, show a much higher value than they were generally thought to possess.

The great mineral wealth of the kingdom is apparent from the above statements, which show that the value of the minerals produced during the year amounted to 27,559,844l.; to which must be added the value of building stones—raising the sum to 30,602,322l.; and that the value of the manufactured metals was 20,434,270l., which, with that of other mineral products (including building stones) was 37,783,021l. In another column we publish a more detailed epitome, and in future *Journals* shall give a complete abstract of the entire return, embracing all the features of our general mining industry.

The late fall in the standard, we presume, is merely one of the eccentric movements on the part of the smelters to let the miners know there are such people as copper ore buyers in the world, who have power and will use it; just as ship captains flog the boys now and then, to let them know, and let them know "who's who," or as a bustling housewife gives the servants a little "cold tongue" periodically, to inform them her temper is not dead but asleep. We see nothing to be apprehended, as it probably may as suddenly rise. This we do know—that supplies of copper ore are short, the demand for copper great and growing, the ore when sold is weighed off and shipped with unexampled speed, and that the supply of ore is not likely to be considerably augmented. All this we know as facts, and, therefore, cannot but conclude the fall we have before said, is but temporary and capricious.

There is much more to be complained of than the fall in the standard at the ticketing. Our correspondent, whose complaints we stated last week, is but one example amongst many of similar nature—sample charges. We this day insert a letter from Redruth on this subject, in which the charges are so outrageous and glaring, that attention should be for right sake called to it, even should the samplers put in the claim "vested rights" for protecting their enormous fees, complimentary or compulsory. These "vested rights" will soon, we trust, like many other customs so called, be numbered with things of the past—amongst the category of rotten boroughs, coachmen and guards' fees, extra sixpences to obsequious, deceitful servants, &c.

If their salaries be not high enough—Heaven save the mark!—smelters can afford to raise them; but to mulct a small struggling miner in enormous fees for sampling, weighing off, &c.—to oblige the miner to pay extravagant charges for dinner parties, whether attended or not, horses never there, is too bad—it is a relic of the old Bacchanalian extravagance. The tastes and notions of the people have altered. It can be no valid objection to gentlemen attending on business sitting together and inviting their friends to a handsome dinner at the cost of the mines. We believe such reunions and interchanges of sentiments are productive of great good, and should not be discouraged or discontinued, but let it be confined to something like moderation. Evils frequent those for



care themselves; let us trust it will be so in this case. Miners and samplers may both depend upon their sole object is the benefit of both. We argue that the sampler should be handsomely paid, rendered perfectly independent in his position; he then would be spared as being the semi-independent individual he now is considered, whether he think himself so or not. To the miner it would be a relief, as small parcels would then be freed from the heavy costs which keep many out of the market—sampling, ticketing, and weighing off being a bore. We have known gentlemen so disgusted at seeing them in the cost sheets on small lots, that it has scared them, and confirmed their opinion (though a false one) that they were the victims and prey of a rapacious set of miners, smelters, &c. *hac genus omnis.*

We sincerely hope that some improvements will be made to mutual advantage, more in accordance with the spirit and taste of the times, so as to prevent a repetition of exposures such as we have lately felt it our duty to publish to the world.

[FROM A CORRESPONDENT.]

It grieves us sincerely to hear on all hands but one opinion of the exhibition of the ROYAL CORNWALL POLYTECHNIC SOCIETY, lately held at Falmouth—that is, the expression of regret at the paucity of models for improvements in mining machinery, there being not one displaying novelty or particular merit. True, ZENNER's rotating baffle was there, and the model of a crusher, well executed; but there was nothing new, nothing displaying that original capacity for invention the Cornish have so long been distinguished as pre-eminently possessing; none of the exquisite models of working machinery so often displayed, which, even if they consisted of nothing else, were remarkable for the splendid workmanship of their constructors.

Nor were the class of visitors we could like to have seen present to be found;—that is, they for whom these benefits were originally intended—few or no miners, few or no captains of mines. There was the numerous display of beauty and of dress, there was the venerable Chairman, a few of the Fox family, but not that galaxy of *savants* we have sometimes seen. The pictures, too, were very good, but as we only looked on the exhibition with miners' eyes, we could not shut them to the fact of a great falling off in the real utility of the institution.

We cannot persuade ourselves that this county, which has produced TREVITHICKS, VIVIAN, HORNBLAND, HUNTS, and other illustrious men, is exhausted of its talent or its greatness. We fancy that the exhibition is not made so attractive as it should be to the working men, amongst whom a vast amount of mechanical ingenuity is found. It has also struck us that the rewards are too small to make them worth contending for by persons of this class. It would be a misfortune indeed were the institution to be allowed to languish for want of mere pecuniary assistance, which we think is the least of the evil, or the worm beneath it. Were it so, an appeal to the Duchy would doubtless meet a respond that would remedy the evil on that score; and we suggest, if a day were given to miners on which they can visit the place gratis to hear the addresses, it would do good: at all events, it is patent to the most casual observer that the interest once excited is dwindling, and if not regenerated from some source must and will become extinct.

There are plenty of subjects for premiums, the which, if they were higher, would certainly cause competition. The premiums should be doubled, or even more than that; then would the working man be encouraged to hope for, and endeavour to obtain, that which would repay him for his outlay. Such haubles as a set of stamps, worked by mice, being allowed to be shown we regret. What is wanted is not pretty trifles; they are all very well in their places. The requirements of the age, the end and aim of the institution, should be to foster talent in works of ingenuity and sterling worth, which shall add dignity to the institution, to the county, and fame to the inventor.

We close these remarks by hoping they may be successful in exciting a movement to greater exertion and energy on the behalf of the management and of the public. No institution deserves more from the country generally, and the Duchy in particular; and we do hope and trust, if pecuniary matters at all interfere, that an energetic and proper appeal to that source will be made, as the institution eminently deserves it.

By the *Omagh*, from Port Adelaide, via Singapore, we have received advice from Adelaide to July 15. The Legislature was to re-assemble for the dispatch of business on the 21st of the month, and questions of great colonial importance were to be brought forward—amongst others the Waste Lands, Postal Communication, and Education Bills.

The discovery of fertile lands and freshwater lakes between Lake Torrens and Mount Serle, which are represented as forming a perfect paradise, is confirmed by Captain FARRINGHAM, R.E., and announced in the *Government Gazette*. General satisfaction was expressed, and the colonists seem to be in a state of great exultation in consequence.

Railway extension was a subject of general discussion by the colonial press and the public, and a portion of the journals argue that Government should offer guarantees of 7½ per cent. to private companies, as an inducement to capitalists to invest their money in the construction of these undertakings. The line most desired is said to be that from Adelaide to the Murray River.

The arrival of each mail from South Australia brings fresh evidence of the great extent of her mineral deposits by the discovery of copper mines. Another is mentioned on the present occasion, but, at the same time, it is stated that hands suited for this description of labour are inadequate to the demand, and it is recommended that the superfluous mining population of Cornwall and Devon should emigrate to these localities, where high wages would be given, and the mineral resources be effectually developed. The copper mines of South Australia are well known throughout the world for their great yield and richness, yet many, such as Port Lincoln and others, remain unproductive, in a commercial sense, from the difficulty of obtaining miners.

The Burra Burra shares are quoted at 130½ on 5½, paid, which is a great temptation to mining enterprise; and similar results, it is said, would attend the working of many other deposits, if efficiently carried on, and which the want of hands alone retards.

The continuous and excessive drain of gold from the Bank of England has resulted, as was anticipated in well-informed quarters, in an advance of ½ per cent. on the rate of discount, 6 per cent. being now the charge. Although the amount of gold imported into England during the nine months ending September is considerably beyond the receipts for the corresponding periods of the two last years, it has yet proved insufficient to meet the demands upon this country: 20,866,000*l.* in specie and bullion was the value of the imports during the past nine months, of which 8,472,300*l.* was furnished by Australia, 6,182,400*l.* by California, and 4,858,600*l.* was received from other sources. In the nine months ending September, 1855, the entire receipts were 19,219,000*l.*, and in the corresponding period last year 19,820,000*l.*, showing an increase this year of 1,046,000*l.* France alone has this year absorbed a greater amount of gold than England has received; the entire sum remitted to our continental ally being 24,000,000*l.* The demand for gold in France has been, to some extent, occasioned by the same influences which have operated on this side of the Channel. The serious effects upon the trade with the United States, occasioned by the money panic in America, which has necessarily suspended the returns upon which we and our neighbours relied. The trade of this country with the United States is estimated to represent not less than 40,000,000*l.* per annum, and the consequence of any occurrence which may arise to disturb such an enormous traffic may be easily appreciated. It is calculated that about a million and a half has been already withheld from us, upon the receipt of which we could, under ordinary circumstances, have relied with certainty, while the calls upon British holders of stock have been excessive, amounting in one instance to a quarter of a million sterling.

We now learn that the wild and reckless speculations in railway stock, which have brought about this state of things, has led to the suspension of payment of all the banks in Philadelphia—the fact being that the securities held by the banks there, as well as at New York and elsewhere, are entirely unavailable, or can only be realised at a ruinous sacrifice. Discounts are quoted at from 20 to 60 per cent., sufficiently indicative of the alarming condition of the markets. As it is evident, however, that the present crisis must have occurred with greater or less violence at some period or other not very remote, it may be as well that it has happened now, when we may hope that the foundation of a sounder state of affairs will be laid for the future.

The Indian revolt has also led to demands upon our resources beyond those for which we are ordinarily expected to provide. The transport of

troops, materials, &c., has already cost us half a million of money, and the East India Company has borrowed from the Bank of England a million more, to enable it to keep its resources on the other side intact. That the rate of discount, therefore, should be advanced is very natural. A generally abundant harvest, and favourable returns of the silk crop, have placed us in much more satisfactory circumstances than with these extra demands upon us we might have been; and we have every confidence that the vast resources of this country and its colonies will enable us to tide over present difficulties and inconveniences, and attain a condition of prosperity in which the world at large will participate.

We are enabled to announce that despatches from the Home Government will be this day forwarded to the different local Governments of Australasia, containing the final determination of the authorities for the adjustment of the differences which have existed in these colonies respecting postal communication with the mother country; and, we believe, it will be found that the article on this head which appeared in our last Journal contains the general details, and which will be carried out in their entirety.

Mr. CHAMBERLAIN WETTON goes out by this mail as superintendent in the colonies of the Royal Mail Company, now incorporated with the European and Australian Company, to perfect the postal arrangements of the Suez route, to and from Melbourne and the other capitals. There is no doubt but that the plan now determined upon will be efficiently carried out, and give general satisfaction to the various colonies, as well as to the mercantile community of this country, who are now so extensively engaged in the trade and commerce of our Australian possessions.

#### SOUTH WALES INSTITUTE OF MINING AND MECHANICAL ENGINEERS.

An important meeting of Engineers and Mineral Proprietors interested in the Railways and Works of South Wales, was held at Merthyr on the 30th September.

The object of the meeting was to consider the desirability of forming an Institute, at which the discoveries and improvements made in the mining and manufactures of this district from time to time may be reported upon and discussed. All the principal ironworks of South Wales were represented at this meeting; the principal engineers of the district were present, or sent letters in favour of the proposed Institute. After a very interesting discussion, the following resolution was unanimously adopted by the meeting:—

That this meeting is of opinion that the time is come when it is expedient to form an association of the mining and mechanical engineers of South Wales, to promote the branches of science they practice; and that this meeting hereby constitutes itself such an association, to be called the South Wales Institute of Mechanical and Mining Engineers.

Further resolutions were then passed, appointing a committee to draw up a code of laws for the government of the Institute, naming local committees, &c. The meeting was then adjourned to the 29th inst.

#### LECTURE ON ACCIDENTS IN MINES, AT THE BRISTOL MINING SCHOOL, BY MR. HERBERT MACKWORTH.

The lecturer began by observing that one of the principal objects proposed by the owners of collieries to be obtained through the medium of the instruction given in this school, is the diminution of the fearful number of accidents occurring in mines. The various lectures which had been delivered respecting machinery, shafts, ventilation, and other branches of mining, although relating more especially to the economy of mining, were almost to the same extent instructive as to the prevention of accidents, for those mines which are worked in the best manner, and with the wisest economy, are also the safest. Neglecting the timbering of the mine, providing an inefficient ventilation, or allowing machinery or materials to get out of repair, are the most pregnant sources of accident to the workmen, and occasion serious injury to the owners. So various are the dangers occurring in mining, that no manager should be satisfied with his own experience as to such risks, but should refer to the lists of fatal accidents now annually published, which exhibit dangers in every form, and supply useful cautions for his guidance. It is desirable to consider these lamentable occurrences statistically, in order to ascertain the comparative amount of attention which ought to be given to each class of dangers. In the district connected with this School there were in five years 671 fatal accidents, each causing one or more deaths; of these, the great proportion of 341 arose from falls of roof and coal, the former being nearly double the latter. It is, therefore, evident that the attention of the officers of a pit is chiefly required to the judicious progress of the excavation, and the supporting of the mineral or roof, either temporarily or permanently.

The lecturer then passed in review the waste and danger attending the thick coal working in Staffordshire, when it was not worked as "long work," the "sponge work" of South Wales, and the excavation of thick veins of coal generally. He alluded to the peculiar modes of working coal at Cruzot, the Slash and the Bideford Collieries, so as to avoid the ground running in, and recommended the more general adoption of "long wall" working, as the most skillful, economical, and safe. The duties of the officers of the collieries consist in examining and sounding the roof of the mine before the men enter, and at intervals during the day in seeing that there is always a spare supply of timber in each working place, and that the men put up temporary props or sprigs, as well as the other timbers, in order to keep the vein or the roof from falling. The most careful men should be set to work where there is danger of any kind. The best place to teach a collier to be careful is in his working place, and the men ought to be visited at least as frequently underground as on the surface. No provision would tend so much to reduce the number of accidents in collieries as that of visiting the working places four times per day. Without frequent supervision it is impossible to keep up proper discipline, and without discipline in dangerous occupations, such as the army, navy, or in the mines, there is sure to be a much larger and unnecessary sacrifice of life. It is in consequence of the frequent supervision and discipline introduced by the system of deputies, or special men selected to set the timbers in the collieries of Northumberland and Durham, that the ratio of accidents is less than in any other collieries in England. Nowhere is coal worked cheaper. The roads along which many persons pass should receive the greatest attention. Arching should be much more frequently substituted for timber than is the case at present; it should be put in as soon as the ground is got out, before the latter has time to settle or to absorb the air, when the pressure becomes enormous, and often irresistible.

Accidents in shafts amounted to 138, and were next in importance from their frequency, forming one-fifth of the whole number: 29 out of the 138 arose from persons falling in from the surface, a danger which will be much removed by the application of the general rules of the Inspection Act,—shaft covers, or sliding fences lifted up by the cages, are now generally used: 28 accidents occurred whilst persons were ascending or descending from failure in the machinery, or from the cages not being covered at the top and fenced at the sides; boys are thrown off from having no handle to hold on by: 16 persons were killed by falling from stages, or landings, in the shafts, chiefly in sinking or shifting pumps. A greater number of accidents have occurred from stones, timber, &c., falling from the sides of the shafts, which the provision that the sides of the shafts shall be securely walled will hereafter greatly reduce. From ropes and chains breaking in shafts, and on inclines, there have been, amongst 30,000 workmen, 17 accidents in five years, one-third of them from ropes so much worn as to have been spliced; splicing is now almost universally condemned in this district. Somewhat more danger will arise from the general introduction of wire-ropes, which in many cases, from having been made of inferior materials, break short off; and whenever wire-ropes are used the cage should be provided with White and Grant's, or some other safety apparatus, to prevent the fall of the cage. The appliances for this purpose were explained, as well as the shaft indicator and tuff on the rope, used to prevent overwinding or pulleying. The lecturer observed, that any one who compared the dangers of raising and lowering men in collieries with the excessive labour and danger of ladders, or the cost of "man-machines" in metalliferous mines, must be convinced that no greater boon could be offered to the workmen in the latter than raising and lowering them by ropes, guides, and good machinery.

As many as 41 fatal accidents had arisen from trams underground, 11 of them being on inclines. These were attributable to employing very young

boys to drive the horses, and to run past the trams to open doors whilst the trams were in motion. The mortality amongst boys under 15 years of age was fourfold its usual average. Of explosions of gunpowder there had been 10, chiefly in consequence of not using the safety-fuse. Several great eruptions of water had taken place, which were attributable, in most instances, to the want of plans, and the precaution of boring in advance of an exploring drift. At the Gwendraeth Colliery, Carmarthenshire, the workings had extended up to the bottom of a valley, in which there was a great depth of quicksand: 60,000 cubic yards of quicksand ran in a few hours, with such force and velocity that the rush of air broke the pit framing. Seven boilers have burst of the haycock or wagon shapes; they were generally in bad repair, and in one case the stay was loose. Suffocation by underground gases, although immediately fatal on only four occasions, was connected with the greatest amount of suffering and loss to which the mining community was subject. Poor air destroyed more lives than all the accidents. Injury is done to the workmen long before the air is so deteriorated as to cause a light to burn dimly.

Explosions of fire-damp were also generally due to inadequate ventilation. Although but 74 fatal accidents of this description had occurred, as many as 173 lives had been lost. The two greatest explosions in England—those at Cymmer destroying 116, and at Lund Hill destroying 189 lives—were lessons to be remembered by every owner and manager of a colliery. In each of them fire-damp was only occasionally seen, and they were worked with naked lights. Explosions seldom or never now occurred in the most fiery collieries, because they are worked with locked safety-lamps. After the fearful examples we have had, if an explosion occurred in a colliery where safety-lamps are not exclusively used, the blame should rest on the owner or manager. The men should be prevented from entering any fire-damp colliery until the fireman had been through the work and come out. If fire-damp were found in any district, the working of the coal should be stopped, and the entrance guarded like a powder-magazine, until the fire-damp was removed by ventilation. Great harm has been done by the unqualified condemnation of colliers as reckless, when the fact is, few classes of men pay more attention to their own safety than colliers: a few there will always be who, by a careful manager, will be placed where they can do little harm. For every example of recklessness on the part of a collier, it would not be difficult to quote examples of the recklessness of managers or owners, whose own lives are not subject to the same risk. From a comparison of the ages of the persons killed, it appears that boys under 15 incur double the risk of death; whilst the risk is the least to men between 20 and 30 years of age.

The number of accidents in coal mines is year by year decreasing, although the production of coal and the number of colliers increase rapidly. Mining in metalliferous mines is not less dangerous: Mr. Blee ascertained that in the great copper and tin mining district of Gwynnapp, Cornwall, one out of five miners met with a violent death. In the coal mines of Great Britain it is about one out of eight, but in some districts the average rises to one in three. The lecturer then gave some hints as to the removal of wounded men out of the mine, the means of restoring respiration, and the uses of accident-rooms; and stated that he anticipated from the instructions at mining schools, not so much a reduction of the number of accidents as the adoption of philanthropic measures, directed to the physical and moral welfare of the mining class, by which a still larger aggregate of good might be effected.

#### THE LUND HILL COLLIERY EXPLOSION.

Mr. EDWARD HEDLEY gave a lecture on this subject at the BRISTOL MINING SCHOOL, on Monday. The coal seam in which the explosion took place was called the Barnsley seam, and varied from 8 to 10 ft. in thickness. Near the outcrop of this seam, at a distance of about 5 miles north of the town of Barnsley, it was divided into many small beds by clunchy partings several inches thick, but further south many of these partings were wanting, and at one mile north of Barnsley it showed the following section:—coal, 1 ft.; clunch, 2 in.; coal, 2 ft. 4 in.; clunch, 8 in.; coal and pyrites, 7 in.; coal, 1 ft. 10 in.; total thickness of the seam, 9 ft. 7 in. This was the most favourable section of the seam known, and the one in which workings had been most extensively carried on in former years, it not being more than from 125 to 140 yards from the surface. It yielded much inflammable gas, especially in places which were being driven at any angle with the line of cleavage. It was usual to carry excavations called "bord-gates" some distance in advance of the working places of "banks" to the rise, so as to drain the gas from districts of coal to be afterwards worked. The Barnsley seam overlaid with about 18 to 20 ft. of blue metal, and rested upon 4 or 5 ft. of fire-clay, this fire-clay was known to contain large quantities of fire-damp in bags or cavities; a remarkable escape of gas from some of these cavities took place at the Oaks Colliery, near Lund Hill, in August last, explosion being prevented by the use of safety-lamps. Mr. Hedley gave a detailed account of the method of working and ventilating at Lund Hill prior to the explosion, and then proceeded to notice a few particulars respecting the explosion and the recovery of the bodies.

After it was agreed amongst the mining engineers who assisted on the occasion to use water for the extinction of the fire, 60 ft. of water in the shaft was considered sufficient to attain this object, but afterwards the water was found to have risen only 30 ft. in the workings above the level of the bottom of the pit. The pent up gas in the higher parts of the workings had been supporting two columns of water 30 feet high, one 9 ft. diameter and the other 11½, amounting to a weight of 152,216 tons, or a pressure of about 1½ lb. per square inch. The area of workings unoccupied by the water was about twice as much as that occupied. As soon as the column of water was sufficiently reduced to render its weight somewhat less than the pressure of the gas, the latter rushed up the shafts with great violence, the surface of the water in the shaft falling 30 ft. in consequence. When the water was lowered so as to open the communication between the two shafts, the gas in the immediate neighbourhood of the shafts was drawn off so strongly and purely that it would fire on the safety-lamp at some distance from the top of the shaft.

With the exception of a few of the whole of the bodies were found in such a position as to make it evident that they had met with instantaneous death; but from the length of time that elapsed between the explosion and the recovery of the bodies, it was difficult in most cases to say whether death had been met with from burning or suffocation, or by the force of the blast. Some bodies were frightfully burnt in parts, others had been blown from the bank faces to the goaves with such violence as to have their clothes drawn from them in the transit.

Several other points of interest and utility were named by the lecturer, both respecting the past catastrophe and present arrangements for re-opening the colliery.

#### THE MINING AND INDUSTRIAL INTERESTS OF CORNWALL.

[FROM OUR CORRESPONDENT IN WEST CORNWALL.]

Oct. 8.—In the last two or three weeks the standard has been falling to some extent, although not to such a degree as to produce any alarm on the part of shareholders in copper mines; and there are circumstances sufficient to lead to the belief that, before the conclusion of the present quarter, there will be a considerable advance in the standard. During the past quarter it has risen considerably, and is now, notwithstanding the recent decline, much higher than it was at the commencement of the quarter. The following figures will show mining shareholders, at a glance, to what extent the standard has fluctuated since July last:—

	Tons.	Standard.	Prod.	Price per ton.	Ore cop.
July 2.....	2860	£129 15	6%	£5 17 0	£38 8
" 9.....	4199	128 6	6%	6 2 6	88 13
" 23.....	4186	133 18	6	5 7 0	88 9
" 30.....	3730	135 15	6%	6 4 6	94 4
Aug. 6.....	3562	139 8	6%	6 3 6	96 11
" 13.....	4598	140 8	6%	6 14 6	99 15
" 20.....	5692	146 6	5%	5 18 6	99 10
" 27.....	2907	145 5	6%	6 17 6	103 16
Sept. 3.....	2631	145 5	6%	7 2 0	105 0
" 10.....	4248	147 15	6%	6 17 0	105 8
" 17.....	4530	149 4	6	6 4 0	103 7
" 24.....	2533	144 10	6%	6 12 6	103 2
Oct. 1.....	3935	142 19	6%	6 7 0	99 16

The "ore copper" column shows the price paid by the smelters to the miners each week for as much ore as will make a ton of fine copper, and exhibits the fluctuation of the standard by which the smelters buy. There are causes in operation at the present time which render the temporary decline of the standard a matter of little surprise. The unfortunate condition of affairs in India necessarily checks the export trade to that country to a considerable extent, and we must expect the trade in metals will suffer as well as other things. Accordingly we find, by the Board of Trade returns, that whilst in August, 1856, the value of unwrought copper exported to India was 6825*l.*, in August last the value was only 600*l.* Then, again, copper sheets and nails were exported to India in August, 1856, to the value of 47,278*l.*, and in Aug. 1857, to the value of 37,723*l.* It is probable that in Sept. the difference was greater still between the exports this year than in the same month last year. In addition to which we have to take into account the commercial panic in the United States, the failures of metal merchants in that country, and the temporary check and disturbance of business affairs, all which will after a time settle down, and trade resume its wonted activity, especially the metal trades, as it is well known that the stocks of metallic manufacturers are generally low throughout the States. There are already symptoms of return to a



more healthy position of affairs, and when we take into consideration the fact, that the produce of our Cornwall and Devon copper mines has fallen off in the past quarter to the extent of more than 200 tons of fine copper below the average quarterly production (a deficiency to the amount of nearly 30,000*l.*), we shall see sufficient reason to anticipate that in the course of the present quarter the standard will again advance to at least the position it was in at Lady-day last.

The disturbing causes which affect our foreign export trade in copper, are also likely to have some effect on tin, and perhaps lead. But any decline which may take place may be confidently predicted to be only of short continuance.

There is not much activity in the market for mining shares. Wheel Bassets are low, owing to the lessened production of the mine, and the decline in amount of dividends. At the meeting on Tuesday the dividend was only 5*l.* per share, the previous dividend in August having been 8*l.* The profit on the two months (July and Aug.) was 2696*l.*; the profit on the previous two months was 4080*l.* The falling off is due, in some degree, to the low standard at the first sale in July, but in a greater degree to the mine being less productive than before. The agents are sinking below the 120 at the old sump shaft, and it may be that the mine will be renovated in depth. At present the mine is in many parts poor, and, looking at the monthly sales, it can scarcely be expected that even a 5*l.* dividend will be maintained, unless some discovery be made. At the meeting it was resolved to separate the south mine into a distinct sett. West Setts shares are maintained at 34*l.*; the mine is so productive that probably dividends will increase. The adjoining mine, New Setts, is looked upon with favour as a young mine, and shares are sold at 8*l.* Copper Hill is very promising; a mine sinking below the 70 produces 5 tons per fathom, and looks well for further improvements. The agents have also cross-cut what is called Paddon's lode in Wheel Bassets, and find it 18 in. wide, worth 20*l.* per fathom. The mine, on the whole, is looking so well that shares are firmly held. The same may be said of East Bassets, where considerable expectations are entertained of the intersections by the 80 cross-cut; shares have sold at 75*l.* and 80*l.*; and there is a good report of the lode in the 60. North Frances shares have some what advanced. South Frances from 235*l.* to 240*l.* North Croft is looking better than for some time past. At South Garra, there is a very large ore lode at the shaft, and shares are about 40*l.* Clifton and Wentworth has hitherto been a very heavy drag upon the adventurers; still there are indications to encourage exploration at deeper levels. Wheel Jane has declined to 15*l.* 10*s.* Wheel Kitty (St. Agnes) is looking rather better. Wheel Kitty (Leland) shares about 25*l.* Great Hwas has improved in one or two points, especially the 58 cut. Wheel Margarets from 65*l.* to 67*l.* East Alfred about 4*l.*; the future price will depend upon the quality of the lode when proved in the 15. East Falmouth, 2*l.* 12*s.*

The Royal Cornwall Polytechnic Society held its annual Exhibition at Falmouth last week. Of late years the mechanical department of the Exhibition has not been so well supplied as in the earlier years of the society's existence. The cause of this is believed to be, that when the society was first established many models of machinery, invented by ingenious miners and others, had been lying by for years, without the public knowing anything about them; that when the society was established it brought these hidden inventions and improvements to light, and the stock having been at length exhausted, the supply of new mechanical contrivances is scarcely sufficient to keep up the interest of that branch of the exhibition. It is very desirable, however, that the society should and ingenious working miners should turn their attention to the invention or improvement of machinery for expediting and economising mine processes, especially with regard to the dressing of ores. The Cornish mine engineers have brought the steam machinery necessary for the working of mines to a high degree of perfection; but there is still considerable room for improvement in the dressing processes, so as to avoid waste, and render the poorer class of ore remunerative. The dressing of tin-stuff, especially, should be rendered less expensive; and it is with satisfaction mine adventurers see that efforts are still making for this purpose. At the Polytechnic Exhibition there was a model of a tin-crushing machine, invented by John Ivey, a miner of North Wheal Croft, who lives at Camborne. Hitherto copper ore has been crushed, but tinstuff has been stamped; persons who have ever travelled in the mining districts of Cornwall must be tolerably familiar with the noise of the stamps working. The invention of John Ivey is with the object of doing away with stamps, and crushing tinstuff just as copper ore is crushed. By this means, he says, in the use of his machine, a saving of 30 per cent. may be effected in the time required for stamping any quantity of tinstuff; and at the same time ten per cent. more of tin extracted than by the use of stamps. The ordinary crusher for copper ore has a single pair of rolls, John Ivey's machine has a double pair, one over the other, and of unequal diameter; one set of rolls crushes, and the other grinds the tinstuff. The Judges of Mechanics considered it an ingenious machine, but had some doubts whether the rolls would reduce the tinstuff so low as the stamps, or so low as is necessary to separate the tin from the waste. They awarded the inventor 5*l.*, with liberty to come for another prize if the machine be found to answer the purpose in practice. This is an encouragement to John Ivey, and to other miners, to set their wits to work for the invention or improvement of mine machinery.

Another machine applicable to the dressing of ores was Zenner's rotating baffle, a model of which was exhibited by Mr. Rickard, one of the masters of the Mining School at Truro. This was a German invention, and has been patented in this country by Mr. Zenner, of Newcastle. Captain Eddy, of the Grassington Mines, who has seen the patent baffle at work, is fully convinced of its superiority. It is stated that it will clean slimes, or ores approaching slimes, at quarter the cost incurred by the use of any other apparatus; and the separation of waste seconds and clean stuff is described as being perfect. The first cost is somewhat higher than that of other apparatus, but the expenditure for repairs is less, and the cost would soon be repaid, both from the saving in time and the greater produce extracted. As this was a patented machine, it did not come under the consideration of the judges for any award.

Mr. Rickard, of the Mining School, also laid before the Mechanical Committee a method of his own for constructing plans of mines on sectional planes. The Chairman of the committee described this as an attempt to introduce the trigonometrical system into the measurement of mines, but said it was a question with the committee whether the proposed system was exactly applicable, inasmuch as that in mines there was great difficulty in obtaining an accurate base, which was absolutely essential to trigonometrical surveys. But another plan proposed by Mr. Rickard, he approved of as a decided improvement on the present system. It was the keeping of the measurements in a plotting-book, always open to the adventurers, and capable of being tested by any competent person, instead of the present wretched system of the captain of the mine going underground dialling, and putting the figures in his pocket-book, by which they are lost to every one but himself, and leave no possible test of his measurements but the going over them again. The Chairman of the committee (Mr. Tilly), who has long been connected with mines, justly remarked that "there is no miner who is not perfectly aware how much we depend upon good mapping and good plans for the success of our mining investments; for it will readily be seen by any one that a bad plan involves an end of expenditure, and the complete uncertainty."

The ventilation of mines has engaged the attention of scientific men for some time past, and there is reason to believe that there is great room for improvement in our metalliferous mines in this respect. The effect would be to more fully preserve the health of the miners, and enable them to do more work. Mr. R. W. Fox exhibited a drawing of Struve's mine ventilator, together with a letter from that gentleman, in which he says that his observations induce him to think that the temperature of our rocks, at depths of about 100 fms., would not exceed from 60° to 65° Fah. He was told that in one or two of the best levels of the United Mines the heat is so great that the men are compelled to have cold water thrown over them from buckets. He thought cold air would be very refreshing, and that such quantities as 20,000 cubic feet of air per minute could be supplied by his ventilating apparatus, at a comparatively small cost. He was very much mistaken if he could not give the Cornish miners the air and ventilation they require.

Some important topics were discussed at the meetings of the society. Mr. R. W. Fox introduced, as a subject for consideration, "the best method of imparting information to working miners." The matter was discussed at great length by various gentlemen connected with mines; and the plan which seemed to obtain favour was the employment of some competent person (Mr. Robert Hunt was suggested) to visit the various mining districts, and there impart elementary and practical instruction on subjects having reference to mining; the instruction to be conveyed less by way of formal lecture than by easy familiar conversation with the miners, and by experiments rendered readily intelligible. The meeting resolved to recommend to the committee of the Polytechnic Society the propriety of granting 10*l.* as the beginning of a subscription for giving effect to the suggested plan—at least by way of experiment for a few months; and subscriptions were announced in the room from Messrs. R. W. Fox, Crockett, Carnell, Tilly, and Fawcett. It was also resolved to refer the subject generally to the Polytechnic committee, with a view to its being carried out effectually.

Another subject discussed was the advisability of producing improvements or alterations in the present system of reporting the duty of Cornish engines. Letters on this subject were read from Mr. Thomas Lean, one of the reporters of engine duty; Mr. James Sims, engineer, Redruth; and Capt. Charles Thomas, of Dolcoath. The subject was discussed at great length. Mr. Warrington Smyth, of the Metropolitan School of Mines, being amongst the speakers. There appeared to be general concurrence in the necessity of making an alteration in the present system. Ultimately, it was resolved to refer the subject to the Polytechnic Society, with a suggestion that they should appoint a sub-committee to consider the subject with the principal mining engineers, purveyors, and managers in the county, and with the present engine reporters. Mr. Robert W. Fox addressed the meeting on the subject of the Temperature of Rocks, especially in relation to Cornish mines. To this subject I shall again refer next week, and conclude my present remarks with the expression of a hope, that as the Polytechnic Institution is designed and calculated to benefit Cornish industry, it will receive adequate support, especially from the mining interest of the county.

#### REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

[FROM OUR CORRESPONDENT IN CHESTERFIELD.]

Oct. 8.—The Iron Trade during the past week has been active, and the decision of the ironmasters at the preliminary meeting has given satisfaction to the trade, though no alteration in the rates for the past quarter was anticipated. For railway ironwork there is a steady and regular demand, and prices of general descriptions of iron are well maintained.

The Coal Trade continues to manifest symptoms of improvement, and with a winter demand, and the enquiry for the export trade, there is little doubt of an active business for some months to come. At present we hear of no alteration in prices.

The mining interest in Derbyshire is making rapid progress. The Eysam Company are getting some good ore, but they do not find it to their advantage to smelt it themselves, and they have offered it to the smelters for sale. The Sallad Holes Company have declared a dividend of 1*l.* 10*s.* per share, and the mine is looking well. The North Derbyshire (Wren Park) has produced some good ore, and there would have been a sale in the course of a fortnight, but on Monday last an accident occurred to one of the pumps, which caused a delay. The company have cut some fine ore, and about 10 tons are dressed ready for sale. The manager, Mr. Bentley, is exceedingly confident of the value of the mine. The Mill Dam Mining Com-

pany met on Monday to arrange as to the valuation of the property, which it is expected will be finally settled this week. The company are sanguine of some good prospects, and there is a great demand for the shares, at 1*l.* premium. The Stoney Way Mining Company, at Matlock, expect to be at work shortly when the engine is ready, and they are confident as to the prospects of the mine. The 1*l.* shares have been sold this week at 2*l.* 15*s.* premium. A company, called the Robin Hood Mining Company, has been commenced at Matlock this week, and the promoters are sanguine of success. The Mill Town Mine, at Ashover, is doing well, but its neighbour, the Victoria Mine, has not yet done anything in the shape of getting ore, and we expect ere long the present company will dispose of the property. The lamented death of Earl Fitzwilliam has occasioned a change in the proprietorship of the Elsecar Collieries, which now become the property of the Hon. Charles Fitzwilliam. It is to be hoped that the new proprietor will conduct them on the same liberal basis as did his late lamented father.

#### THE IRON AND COAL TRADES OF STAFFORDSHIRE.

[FROM OUR CORRESPONDENT IN WOLVERHAMPTON.]

Oct. 9.—The occurrence of the fast-day on Wednesday, which is Wolverhampton market day, and which would otherwise have been quarter-day in this town, necessitated its adjournment to next week. At the preliminary meeting of the ironmasters, it was unanimously resolved to cease operations in the ironworks on that day, and this agreement was very generally observed throughout the district, even a large proportion of their blast furnaces being stopped, to an extent never known on any similar occasion.

Thursday was quarter-day at Birmingham, and although the monetary crisis in the United States by no means appears to be terminated, a general impression prevailed that there was every reason to anticipate a steady trade during the ensuing quarter. Some good orders for nails, and for angle iron have recently been given out in this district by the East India Company, and probably the mutiny will tend to expedite the prosecution of railways and other works in the country, so soon as our troops get the upper hand.

Pig Iron remains firm at the prices quoted last week;—3*l.* 15*s.* to 4*l.* for good qualities of hot blast; a few very first-class makers getting 4*l.* 2*s.* 6*d.* Ironstone is firm at 18*s.* for best quality. North Staffordshire calcined ore and the Cumberland red hematite are in very active demand, and fetch fully as high prices as last quarter. The former is quoted at 20*s.*, and the latter at 24*s.* per ton, delivered at the works.

The demand for Coal is active, but the supply is also large. A large quantity of Durham coke is imported for use in the blast furnaces.

The general trades of the district maintain a steady activity, and so far the Indian difficulties have not exercised those disastrous effects on the trade of the country which might have been reasonably anticipated. It is one of the great advantages resulting from free-trade, and the extension of our markets, that we are much less dependant than formerly upon the prosperity of any single country, however important, as a consumer of our manufactures.

#### STOCK, MINING, AND RAILWAY SHARES IN IRELAND.

[FROM OUR CORRESPONDENT IN DUBLIN.]

Oct. 8.—The stock markets have again fallen this week, and prices are quoted fully 10*s.* per cent. less, having gradually declined from 89½ for Consols to 88½—this day's price. The prices of shares have been well sustained, considering the fall in Government securities. Mining shares have been dealt in at fair prices; those of the Wicklow Copper Mine Company advanced to-day from 31½, the last price, to 32. The following are the latest quotations, as usual:—Consols, 88½; New Three per Cent., 89; Hibernian Bank, 32½; National Bank, 35½; Royal Bank, ex div., 22; British and Irish Steam, 37½; Grand Canal Company, 36; Patriotic Insurance, 6½; Mining Company of Ireland, 15; Wicklow Copper Mine, 32; Cork and Passage, 11½; Belfast Junction, 38½; Dublin and Wicklow, 5; Great Southern and Western, 98; Midland Great Western, 48.

The paraffine candles made at the Peat Works at Athy are now coming into very good consumption here, and are admirable in quality, and it is likely that the extended sale which the company will be able to effect for this and their other manufactures will make it a good dividend-paying and prosperous company, and yet compensate the shareholders for their patience. The processes for making peat available as a fuel while in a state of compression, and those for the production of illuminating gas are proceeding most successfully. On the former subject Mr. Hays read a paper before the British Association during its meeting here, and it elicited great interest and considerable discussion, and Mr. Hays's statement that he could produce charcoal, and sell it at a profit in Dublin at the rate of 1*l.* per ton will, if correct, produce very great results, and enable us to compete at this side with some of our manufacturing friends in England. However, it remains to be tested on a large scale, and I understand it soon will; the result is anxiously looked forward to, and the compressed peat, it is considered, will be suitable for locomotive purposes, and can be produced at about 7*s.* 6*d.* or 8*s.* per ton; this, if correct, also would produce a most enormous saving. The illuminating gas, which was also the subject of a paper, has succeeded to an extent which some of your friends did not anticipate, and four large mansions are now lighted with their gas from peat, satisfying the owners to the fullest extent; the experiments, therefore, to which I have so often alluded have proved as correct when submitted to the more severe tests as they did before. Altogether the present age seems to be the specially appointed time for the development of peat and its products, and certainly no effort tending to render profitable the large tract of peat in Ireland should be unheeded.

The great profits which it is well known would arise from the taking and curing of fish on the coasts of Ireland for export to the English markets have not been, it appears, sufficiently alluring to induce capitalists to sustain and make the London and West of Ireland Fishing Company an established fact. It is to be hoped that the project is not abandoned, but that it will only be necessary to wait for some change in monetary affairs to witness the employment of capital in the development of the Irish fisheries. One company, an established one, however, for some years past—the Royal Irish Fisheries Company—is still pushing its way, and it is now sought to extend the sphere of operations beyond the employment of a few vessels on the south-west coast.

The large beds of decomposed felspar in the neighbourhood of Bellick, county Fermanagh, are now, I understand, being worked by some spirited parties, including the proprietor himself, whose exertions in directing attention to the mineral nature of his property may, I trust, meet with success; and other landed proprietors should follow the good example set in this instance, and not allow the resources on their estates to lie dormant and unproductive.

The Dublin and Drogheda Railway Company are about issuing 170,000*l.* worth of preference shares—guaranteed 5 per cent.—to pay off the mortgage of 140,000*l.* held by the Belfast Junction Railway Company on the Navan branch.

#### REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

[FROM OUR CORRESPONDENT IN SOUTH WALES.]

Oct. 8.—The Iron Trade throughout Glamorganshire is, upon the whole, in a satisfactory condition. At several works, however, indications of depression appear, and the number of hands has been reduced. At Dowlais and Merthyr so much time is occupied with the affairs of what may be called the social government of the population, that there are little tidings or reactions of any interest to the mining world: charters of incorporation, improvement of water, and lighting the streets, engross almost exclusive attention. Business proceeds amidst all these debates evenly, and without any violent change one way or the other. The same remark will apply to the entire country. Among other items of news is one from the Llynvi works, in the neighbourhood of Maesteg, and here, 140 men formerly employed on the large railway will have received notice that their services will not be required after the expiration of a month. It is believed, however, that many of them will be offered employment in other departments of the establishment, but little beyond the bare fact mentioned may be relied upon. Taking a wider range, we find intelligence of the discovery of some valuable copper ore at Alkylwalia, Carmarthenshire. Excavations have been for some time in progress for a tunnel on the Carmarthen and Cardigan Railway, and the workmen have now come upon what is likely to prove a source of considerable riches. It is stated that a fossil has been examined by Mr. Penrose, assayer of ores, at the Landore Silver Works, Swansea, and that gentleman pronounces the

sample to be one part quartz and the other copper pyrites. This interesting discovery has been predicted from the first by the engineers.

At Merthyr, proceedings have again been taken under the Act to "prohibit the employment of women and girls in collieries, and to regulate the employment of boys therein." On Monday last, Mr. Thomas Edwards, a contractor, at Pen-y-darren, was brought before the Merthyr magistrate, charged with having employed a child, under 10 years of age, as an underground door-keeper. For the defence, it was pleaded that the contractor had been deceived by the boy's father, who represented him to be much older than he was. The father being now dead it was impossible to overturn this statement, and the defendant was, consequently, merely ordered to pay the costs.

We may here call attention to an interesting statement relative to the Forest of Dean ore, of which we have had occasion to speak on several occasions. A few years ago an effort was made by a gentleman of considerable scientific attainments, Mr. Robert Mushet, to develop the riches of the district more than had hitherto been done. For this purpose a shaft was sunk, and such success attended the experiment that three new pits have also been sunk within the last twelve months. The ore is as rich as any in the district, and averages, at the lowest point reached, 60 per cent of iron. A local paper says—"All that is now required to bring about a happy consummation, is the active pushing on of the railway from Monmouth into the Forest; and we are justified in stating, that iron furnaces and factories are already not only contemplated, but the erection of them actually decided upon, in the vicinity of Coleford, and they will, in all probability, be commenced before the railway works on the east side of the Wye are." This fact is obviously of immense importance to the district, and shows very forcibly the advantages of speculation when founded upon skill and practical knowledge. The people round about are very bitter about the delay in the completion of the railway, and it really seems as far off the opening as ever. We announced, on good authority, some time ago, that the date had been fixed, but the time passed with precisely the same indications of the opening-day as on many previous occasions. It is not yet ready to go through the Forest, but the portion of it which is actually completed and fit for traffic (as far as Monmouth) is lying neglected. The contractors may, perhaps, be able to assign a satisfactory reason for a course which appears inexplicable to everyone else.

In other matters we have nothing fresh to communicate. The week has been a dull one, and with the exception of what is included above, not a single topic of interest has turned up.

Some particulars of the meeting held at Merthyr to promote the formation of the "South Wales Institute of Mining and Mechanical Engineers" will be found in another column. The meeting was a highly-important one, and attended by representatives from all the principal ironworks in South Wales; most of the principal engineers were present, and expressed themselves in favour of the proposed Institute.

#### INDUSTRIAL PROGRESS ON THE CONTINENT.

[FROM OUR PARIS CORRESPONDENT.]

Oct. 8.—The Metal Market here is sensibly improving, not by any spasmodic effect, but by steady and sustained increase of consumption. For the present, English iron cannot compete with native iron in consequence, of course, of the heavy land carriage from the sea ports to Paris, and the duty. Nor is there any noticeable quantity of it available for sale; and for even this customers are with difficulty found. In seaport towns, and in districts of easy access from the coast, it is the reverse, and French iron is virtually excluded from the native market; to obviate this disadvantage, and place French on an equal footing with English iron, it is proposed to reduce the price of goods sold near the seaboard. People living near the works, or even in Paris, will scarcely be pleased when they hear that iron, for which they pay a certain price, is sold for 20 per cent. less in a locality more remote from the centre of production, and at a proportionately diminished profit to the ironmaster. Paris happens to be one of the best customers to the native ironmasters, especially since the extensive rebuilding of the city has been commenced. In July there were brought in here for construction purposes alone, 743,420 kilos of castings, and 930,860 kilos of wrought-iron; such extensive purchases it would certainly not be good policy to offend. The quotations in the Paris market are—Charcoal rolls, 320 to 330 frs.; coke rolls, 300 to 310 frs.; rods, 21 frs.; and higher numbers, 390 to 400 frs. Iron-wire, 94 to 94-50 frs.; bright, and annealed, 92 to 92-50 frs. The fall at Swansea has had no effect here worth mentioning.—Russian copper is priced at 330 frs. to 350 frs.; Chili, 310 frs. to 312-50 frs.; Lake Superior, 325 frs. to 330 frs.; and sheets, red, 360 frs. Tin, Banca, 335 frs.; Straits, 375 frs. Lead is inclined to fall, and some transactions have taken place below the official price, 67 frs. pigs, and 74 frs. Zinc is, also, in the same predicament, although sheet remains quoted at 160 frs. Spelter has receded to 70 frs. The prices just decided on by the Champagne masters are as follow:—Vorge pig, 152-50 to 155 frs.; pigs for second melting, No. 1, 160 frs.; ditto, No. 2, 170 frs. at the works; charcoal rolls in any of the Eastern Railway stations, 330 frs.; rods, No. 21, 390 to 400 frs.; and No. 20, 400 to 410 frs. The remaining prices are, for delivery in the nearest station to the works, for iron, demi-roches, 370 to 390 frs.; axes, from 3 to 10 kilos, 440 to 460 frs.; from 10 to 15 kilos, 420 to 440 frs.; from 15 to 30 kilos, 390 to 430 frs.; from 30 to 150 kilos, 420 to 440 frs.; plates, 90 to 118 millimetres, 420 to 440 frs.; angle iron, 330 to 400 frs. Science is rising into favour with the Papal authorities, which is an advance upon the days of Galileo. Signor Secchi, whose improved balance barometer was noticed some time back in the columns of this Journal, and who is the director of the Roman Observatory, is about to add to the establishment a magnetic observatory. The Pope has given 500 Roman crowns for the purchase of a complete set of magnetic and meteorological instruments. Mining enterprise appears likely, at last, to receive considerable development in the continental territory of the King of Naples. Important seams of coal have been discovered, and one of them is on the eve of extensive working. In the neighbourhood of Monfina and Ferdinando large quantities of iron-ores have been found, which have furnished during the past six months of the present year 30,000 cantari of this mineral. The researches that have been carried on during the last three years in the Apennines have led to the discovery of the San Donato and Campi Minori, which have each already produced 40,000 cantari of ore. The San Donato Mine has four galleries driven, and produces ore of excellent quality, which, like that from Campi, is a hydrated oxide of iron.

Some months back—in short, nearly a year since—a London Journal stated that aluminium had then become an object of ordinary manufacture, and was made up into articles for domestic use, which were commonly sold in this capital. Because your correspondent, speaking from actual knowledge, ventured to contradict this assertion, the publication in question became exceedingly irate, and gave utterance to some very silly observations. Who was in the wrong the reader will be able to decide, after perusing the following translation of a paragraph that appeared in last Sunday's *Moniteur*:—"The industrial applications of aluminium acquire every day further development. The manufacture of this metal, which, up to the present time, has only been in an experimental state, and by means of laboratory processes (that is to say, by delicately scientific operations which could not be carried on in a factory), has just been organised in a definitive (practical) manner at Nanterre, near Paris, by Messrs. Paul Morin and Co., who have put in practice the improved processes of M. H. Sainte-Claire Deville." The inequalities of the translation will be pardoned on the score of its literalness, and because of the necessity of being precise and accurate with so ill-informed and ill-conditioned an opponent.

An invention has recently been made public which is likely to be of some importance to persons interested in the iron trade, as permitting them to manufacture many articles in cast-iron which hitherto could not be made in consequence of the impossibility of tinning them for use. M. Weinberger ascertained that it was the presence of carbon, either in the state of graphite, or combined, which prevented the iron from combining with cast-iron. He imagined that if he decarbonised the articles the cast-iron would then be brought into the same condition as wrought-iron, and as easily tinned. The decarbonisation was effected by enclosing the articles in fire-dry or even cast-iron vessels, from which air was carefully excluded by luting together with some substance containing and capable of giving off oxygen, such as sulphur, and keeping them at red heat for several days. The decarbonisation is thus effected; and when the articles are removed from the vessels they are carefully cleaned with acidulated water, and tinned after the same manner as common wrought-iron goods. The articles in cast-iron must be refined with charcoal, as, if coke be employed to melt the metal, traces of sulphur and phosphorus will remain, which will render the tinning operation very difficult, if not impossible.

PROGRESS OF IRON SHIPBUILDING.—We have now in our office the model of a vessel constructed upon Mr. John Clare's patent principle. The keel is nearly flat, while in proportion to the width the vessel is of a great length. It appears that the plan adopted by Mr. Clare is to obtain a great amount of strength, with a comparatively small proportion of weight. The system of flooring pursued is likewise different to that at present in use, and a large quantity of cargo can be taken, every available space being utilised. If adopted, there is no question but that this principle will totally supersede the present modes hitherto in use. The system proposed assumes highly feasible, and we trust that, now the question has assumed a practicable shape, it will be fully tested and thoroughly investigated. A subject of such national importance deserves the attention of all, but more particularly those connected with the iron trade and our mercantile marine. If commercial men and practical engineers are convinced of the utility and the great benefit to be derived from Mr. Clare's invention, they, no doubt, will adopt it; this done, Government must follow in their wake, and we shall then, probably, not have to report such a loss as that of the *Transit*. However many have judged of the views of the inventor, and in some instances have differed from several of his opinions, every one acquainted with the subject must give him great credit for the perseverance and untiring energy displayed for the purpose of furthering improvements in the construction of our iron vessels. A great national liability must always retain our maritime supremacy, and it is the boast of Englishmen, in contradistinction to continental nations, that individual enterprise accomplishes everything useful and practicable, while Government is always the drag upon any improvement. It falls to our lot to



notice inventions which, although they seem of great utility on the face of the specification, are never found to be practicable, or advance beyond the stage of sealing the patent: some of these are discovered to be reproductions, and others of such trifling value that they cannot be made available, while several are so costly in their application that they are commercially worthless. Mr. John Clare has defined his ideas practically, and we think it is nothing but a matter of common justice that his views now should be thoroughly sifted, and that merit accorded to them which they may be found worthy of. The model can be seen by any one interested at our office.

## THE COAL TRADE.

The following is a statement of the delivery of coals, &c., in the port of London during the month of September:—

	Ships.	Tons.		Ships.	Tons.
Newcastle	245	80,550	Scotch	6	818
South-West	81	19,732	Welsh	69	19,383
Sunderland	125	46,050	Yorkshire, &c.	36	2,598
Middlesbrough	12	2,362	Liverpool	1	300
Hartlepool & West Hart.	134	30,010	Small and cinders	4	1,050
Byth	10	1,963			
Total				726	219,716
Total imported in Sept., 1856					247,290

*Comparative Statement of 1856 and 1857.*

Imported from January 1 to Sept. 30, 1856	Ships 7857	2,235,463 tons.
Imported from January 1 to Sept. 30, 1857	7418	2,223,187 "
Decrease of ships and tons	409	12,276

## THE RAILWAY COAL TRADE.

Monthly statement of coal and coke brought by railway and canal within the London district, during the month of September:—

Railways.	Tons wgt.	Railways.	Tons wgt.
North-Western	38,530 12	Great Western	5,644 0
Great Northern	37,002 10	South-Eastern	1,560 11
Western Counties	6,063 4		
Total by railway in Sept., 1857			88,805 17
Coal by railway in Sept., 1856			109,488 19
Coal by canal in Sept., 1856			1,968 5

Comparative Statement of 1856 and 1857.

Coal by railway from January 1 to Sept. 30, 1856	901,534 19
Coal by railway from January 1 to Sept. 30, 1857	869,727 18
Decrease in the year 1857—railways	31,807 1
Coal by canals from January 1 to Sept. 30, 1857	19,036 10
Coal by canals from January 1 to Sept. 30, 1856	17,796 5
Increase in the year 1857—canals	1,240 5

## FOREIGN MINING.

LOMBARDO-VENETO PROVINCES, BRAZIL, CHILI, FRANCE, MEXICO, MOROCCO, HONDURAS, SIAM, &c.

Some valuable official reports have recently been collected, which afford a good deal of interesting information on a variety of points connected with foreign mining.

Commencing with the LOMBARDO-VENETO provinces, we find that a mining company established in Venice, in the year 1840, under the name of the Societa Montanistica, has successfully worked the coal mines at Valdagno. In 14 years these mines have furnished upwards of 150,000 tons of coal. As it serves every purpose, except for producing gas, in the manufacturing and steam mills, it has superseded English coal, which is now only used mixed in small proportions with the Valdagno. The company has been exploring two other coal mines in the same province, and a third near Udine. It is also intended to explore and work various mines, some ancient and a few recently discovered, of copper, zinc, lead, iron, quicksilver, and brimstone. The neglect into which mining industry has fallen is attributed to the scarcity of firewood, caused by the destruction of the forests, to the want of practical and technical knowledge of mining, as well as to political and financial vicissitudes. A company has been lately formed, called the Lombardo-Venetian Company, for the carbonisation of peat turf, with a view to utilise the numerous pits of this fuel existing in the province of Venice, and thus in some measure supply the deficiency of firewood. The marble quarries of Vicenza, Valdagno, Verona, and Cadore, are worked with increasing activity.

From BRAZIL, it is reported that in the consulate of Pernambuco gold, iron, jet, nitrate of potash, carbonate of soda, alum, copperas, plumbago, and amber, have been recently discovered, and coal is also expected to be found. The natural treasures of the country are neglected, in consequence of the want of labour. The yellow fever deters many from emigrating to Brazil, but it is considered that the agricultural labourer would have little to fear from it, as it is essentially a maritime disease.

From CHILI, it is stated that the coal mines of Lota and Coronel have made great progress. At Lota, five steam-engines are now working, drawing coal from the pits, and two good moles are established, one of iron, which can be approached by vessels of the largest size, and the other of timber. The mines now yield upwards of 150 tons daily. At Coronel, two steam-engines and a timber mole are now being erected. The produce of the mines belonging to several proprietors is upwards of 300 tons daily. An attempt is now making to work coal mines at the mouth of the River Lebu, where coal is good and abundant, but no produce of the mines has yet come to market.

Passing on to FRANCE, we find that some blast-furnaces have been in course of erection at St. Louis, near Marseilles, for the purpose of smelting the iron ore of the island of Elba. This undertaking is connected with a new establishment for lighting the town of Marseilles with gas. The coke from the latter is to serve as fuel for the smelting of the iron ore. These two joint undertakings are the objects of a company which has been recently formed. For the treatment of argentiferous lead ore, there are four establishments in the neighbourhood of Marseilles. The ore used is derived principally from Sardinia, Piedmont, Spain, Algeria, and the interior of France, particularly from the Upper Alps. These establishments employ from 400 to 500 workmen, and smelt from 4000 to 5000 tons of ore per annum. For the treatment of copper ore and antimony, there is but one establishment, near Marseilles: it is situated at Septemes, and is capable of smelting 3000 tons of copper ore per annum; the ore is derived from Spain and Algeria. For refining argentiferous lead and extracting the silver, there are six establishments at Marseilles, capable of refining 30,000 tons per annum of pig-lead, the produce of Spain. Within the district of Marseilles, and not far from the town at Graessque, Faveau, and Auriet, there are extensive beds of lignite, the produce of which is almost exclusively consumed at Marseilles; they are all in activity, afford employment to 1500 workmen, and produce annually 37,000 tons. Some valuable information is afforded incidentally on the coal and iron trade of Great Britain with France. The importation of British coal into Bordeaux has increased to a very considerable degree, a circumstance owing chiefly to the recent establishment of several manufacturing for the use of the various railways. Several British steamers of a high tonnage are employed regularly between Bordeaux and Cardiff in this business, and there has been a talk of others being put on. At Charente, the demand for coal for the use of the manufacturing and distilleries increases, as wood fuel becomes scarce and dear, in consequence of the land which produced it being turned over to other purposes. A small consignment of Scotch bar and hoop iron has turned out well, and will probably cause a further demand for those articles, which are found to be equal in quality to those so much approved which are produced in the district of Forquard. At Bordeaux, the importation of British pig-iron increases. At Bordeaux, the importation of British coal amounted to 19,408 tons in the year 1856, against 5518 tons in 1855, an increase principally owing to the Northern of France Railway having conveyed coals at low rates into the interior, and the preference accorded to our coals over those of Belgium in the manufacturing districts.

[To be continued in next week's Mining Journal.]

COPPER IN THE SEA.—Experiments are now in progress to show that the sea is constantly charged with a solution of copper. Mr. Septimus Piesse caused a line of iron nails to be hung from the sides of steamers passing between Marseilles and Nice, and obtained a precipitation of copper upon the iron. He finds the metal in the substance of animals inhabiting the sea, and recommends the popular experiment of putting an oyster—a bad one, if possible—on the blade of a knife, and leaving it there for twenty-four hours, when, on the removal of the oyster, the copper will be found on the knife. In Mr. Piesse's opinion, the beautiful blue colour of some of the Mediterranean sea is due to an ammoniacal salt of copper, while the green of other seas is owing to the chloride of copper. —*Chambers's Journal.*

## WEEKLY LIST OF NEW PATENTS.

GRANTS OF PROVISIONAL PROTECTION FOR SIX MONTHS.—R. WASTAFF, Mottram-in-Longdendale: Locomotive engines to be employed in common roads or ways, applicable to agricultural and other purposes.—J. LOBBITT, J. HENDERSON, Renfrew: Steam-engines.—J. MUCKART, Montrose: Combustion of fuel, and prevention of smoke.—H. WINDA, Sheffield: Rotary steam-engines and pumps.—B. BURKINSON, Westminster: Laying submarine telegraphs.—Sir J. C. ANDERSON, Fermoyle, Ireland: Locomotives and other carriages.—Y. CAVALIERE, Paris: Motive power engines.—W. H. JAMES, Old Kent Road: Improvements in steam vessels, parts of which are applicable to sailing and other vessels.—W. H. FRANK, Liverpool: Beams, girders, and bridges.—H. GOSWOLD, Stanley Bridge, Chelsea: Manufacture of cast tubular boilers.—P. F. JOLY, C.E., Paris: Generating and super-heating steam.—E. L. OWEN, Wolverhampton: Propelling vessels.—M. THURLEIGH, North-terrace, Westminster: Direct printing telegraph without relays and local battery.—M. HENRY, Fleet-street: Transmitting motion, especially applicable to apparatus employed in navigation.—R. LAWSON, Manchester: Admission of air to furnaces.—W. E. NEWTON, Chancery-lane: Forging metals.—P. C. BARKWELL, Haverstock-terrace, Hampstead: Preparation for use of caustic alkalies.—J. DE LA HAYE, M. BLOOM, Belfast: Laying down submarine telegraphs.—W. B. JONES, Manchester: Raising and lowering trucks, carriages, engines, &c., on the rails, and appendages from one level to another.—A. B. PATTERSON, U.S.: Laying submarine cables.—J. KESLAW, J. WILKINSON, Eiland, York: Self-acting couplings for railway carriages and engines.—A. V. NEWTON, Chancery-lane: Rook drilling machinery.—JACKSON, ROSE, and CO., St. Suerin-sur-Ile, France: Tyres for railway and other wheels.—G. ROSE, Wigan: Machinery or apparatus for raising water, and employing the same as a motive power.—BAYLES and CO., Monmore-green, Wolverhampton: Chain cable.—R. A. BROOMAN, Fleet-street: Raising and lowering weights and bodies, mines and other like places, in ventilating and other like places, and extracting water therefrom.—A. NORTON, St. Petersburg: Measuring gas.—E. THOMPSON, Wm. J. NICHOLSON, York: Railway switches.—J. FINE, Croftland Moor, Huddersfield: Metallic pistons.

TREATMENT OF AURIFEROUS SAND.—Mr. R. Goulding, whose patent amalgamator we briefly noticed in our last Journal, has terminated his experiments. The result is that the five pennyweights of gold, which were placed in the sand, have been extracted with only the loss of 8 grains, and these can be distinctly traced in the iron of the retort, which was an old one, not exactly suited for the purpose. With the exception of the unavoidable loss of mercury in the retorting process, this was all saved. The tailings were found to be perfectly clean, and the machine performed its work in an efficient manner. Mr. Goulding estimates that one of his machines, of the calibre of that in which the trials were made (1 ft. long by 2 ft. diameter), would amalgamate about 6 tons of auriferous sand in the space of ten hours. The great advantage attained by this amalgamator is, that it is simple and efficient in its working, that no gold is lost in the tailings, and nearly the whole of the mercury saved, so that the hitherto great expense of amalgamation is avoided. Unlike many of the machines which are now erected, this is not for the purpose of crushing and amalgamating, but simply for the latter process; no complicated machinery is required, and consequently it will not be necessary that delays of weeks and months should intervene before it can be said to be fairly at work. We are not aware of what the probable expense of amalgamating a ton being a sufficient saving; this must depend greatly on local considerations; judging, however, from personal observation, we should imagine it could be done at a moderate cost.

VENTILATING MINES.—Mr. Laurent Paud, Paris, provisionally specified some improvements in ventilating and preventing inundations in coal mines. The improvements consist in the use of shafts of coal mines, in which a steam engine, pipe, furnished with a piston, which is worked by the steam engine employed in the mine, or by other means. This piston or pump is thus used to supply the mine with pure air:—At the lower part of the feed-pipe is a branch pipe or channel, which enters a chamber containing a fan or ventilator, which revolves in the direction given to it by the air from the pump, and thus forces the air into another chamber by means of a connecting pipe. The latter chamber is also supplied with a revolving fan or ventilator, which compels the air to enter through an opening into a circular or other shaped gallery extending round the mine. The gallery communicates with several other galleries, provided with doors, which are closed by means of a lever, after passing through chambers containing fans or ventilators of the same construction as those already described, but moving in an opposite direction, enters an exhaust pipe placed in the shaft by the side of the feed-pipe. The exhaust pipe may be furnished with a valve, through which passes the inflammable gas, which may be preserved for lighting purposes. Secondly, in preventing inundations in mines by the aforesaid circular gallery, which acts as a recipient for the water from the intersecting galleries. The water thus collected may be discharged by the usual means.

FURNACES.—Mr. W. Travis, Prestwich-cum-Oldham, in the construction of furnaces, proposes to place or fix plates of any suitable metal or material transversely under the fire-bars for the purpose of checking the direct current of air and forcing it through the fire, thereby economising fuel, and causing a more complete combustion of smoke than has hitherto been accomplished. He does not confine himself to a particular metal, but proposes to use any material capable of resisting fire, as experience alone will decide the number and position best suited to the purpose.

ELECTRIC LIGHT.—Mr. Chas. W. Harrison, Woolwich, has patented some improvements in the production of the electric light. It is well known that condensed gas carbonized to great purity and density, is the best and most durable form of charcoal for the display of the electric light; he, therefore, proposes to place pieces of metal or other suitable material in gas retorts, or in tubes connected therewith, for the purpose of receiving a deposit of gas carbon, until they are coated to the desired thickness; and he then cuts or grinds them to the required form of electrodes; or, secondly, he proposes the use of electrodes of spongy or porous metals, prepared by means of compression into any desired shape. He produces lights of various colours, according to the metals used. For the positive electrode he employs a circular disc, which is kept in position by a small roller.

FISHING RAILS.—Mr. H. Wm. Tyler, Norfolk-crescent, Hyde-park, has invented an improved mode of fishing rails, which consists in an arrangement which admits of a peculiar form of rivet being used, which most securely fixes the rail.

CONNECTING FEED PIPES OF LOCOMOTIVES.—Mr. J. Fenton, Low Moor, Bradford, instead of packing the pipes and sockets of feed-pipes as hitherto used a tube of suitable material to work in another and larger tube, which is provided with a rolling washer inside; on the pressure of steam or water increasing, the washer is pressed against an inclined plane, which is also formed inside the larger tube.

RAILWAY WHEELS.—Mr. Thos. Parker, Derby, provisionally specified some improvements in railway wheels, which consist in making the tire and rim of the wheel in one entire piece; and after its being so made, the spokes are welded in to the inside thereof, and thus there is no necessity for rivets or screw-bolts, as under the present system. The spokes are flat, made altogether under the hammer.

APPARATUS FOR LOCOMOTIVE PURPOSES.—Mr. J. Parkes, Great College-street, Westminster, has invented an apparatus for supporting heavy burdens on soft ground. It consists of a number of feet or clogs, each having two axes, one on each side. These axes are supported on bearings, which are all at a corresponding distance from a common centre, round which they work at the same distance from each other, so that the wheels are set in motion as one, and not as several independent wheels, as in the present system. The spokes are flat, made altogether under the hammer.

DRESSING SLIMES.—A new system of dressing slimes now in use at the Bristol Mines, Connecticut, formed the subject of a paper by Prof. B. Stillman, Junr., read before the Association for the Advancement of Science at Montreal. The main features of the invention appear to be the perfect separation of the "slimes" from the coarser ore without the aid of sieves or screens. This is accomplished by the use of a new and exceedingly simple hydrostatic apparatus, invented by Mr. Stadtmüller. The efficient cause of its success is the movement of a current of water in an inverted cone of iron, having an angular space, surrounding an inner cone. The ore is admitted at the top, and distributed over a conical surface, to meet the ascending current of water, which is so adjusted in volume and force by a proper valve, and by a nice proportioning of the parts, that all the finer and more muddy portions of the ore are the upper lid of the apparatus, and the coarser ore, with the exception of a more forcible current of water, through an adjustable orifice, all the coarser ore metallic particles. These are entirely free from all slime, and are dressed upon a continuous arrangement of self-acting jigs, and are carried immediately to a percentage suitable for market. The proportion of the ore (about one-half) which escapes at the upper portion of the cone is treated by alternate subsidence in large conical vats, the denser portions from the bottom of which are dressed upon Bradford's ore separator (a pan or copper, having no reciprocal motion of the miners' dressing shovels), which has been found, and serves with only one class of ores properly adapted to them, admirably successful and economical. The ore too fine or small in size for the separators are treated upon large conical tables of circular forms, by means of a very gentle current of water, spread in a thin sheet over the table, thus cleansing the last traces of ore from the finer particles of mud with which they are mingled. The adoption of these mechanical means has rendered the whole process of ore dressing one continuous and self-sustaining system, in which human labour bears a very small ratio to the results obtained, compared with any system hitherto devised. In this system the waste of refuse material is disposed of exclusively by gravity and running water, without handling, while the ore is brought up to the highest marketable percentage, however poor the original ore may be, no appreciable quantity of ore escaping in the water. Col. Whittelsey mentioned the great loss of metal at Lake Superior, and stated fine particles of copper, under the Lake Superior washing machines, rise even though they are pressed beneath the surface, and float off in such quantities that they have been found a quarter of a mile distant, to the amount of 2 or 3 lbs. per ton of copper saved. Prof. Stillman said that the loss at the Bristol Mine was not more than 10 per cent., whilst by the old process it reached 30, and even 50, per cent. Prof. Horsford enquired whether a small amount of soda might not be used in the process of clearing ore. Prof. Stillman said that the objection was the amount which would be required was too great, as the weight of water used in the process of clearing is greater even than that of the ore. He continued, in reply to Prof. Horsford, that if sulphuret of iron were present, the ores might be roasted and treated as in Germany, but in the Bristol Mine the amount of sulphur was too small.

FEARFUL COLLIERY EXPLOSION NEAR BARNSELY.—Another of those fearful explosions which are generally so destructive to human life, but not accompanied by such results in the present instance, occurred in the main pit at Higham Common Colliery, near Barnsley, the property of Messrs. Charlesworth, at five minutes past 2 o'clock on Wednesday morning last. The report was heard for several miles around, and until noon hundreds of people assembled from the neighbouring villages, anxious to learn the result, naturally expecting it to be attended by a fearful loss of life. It soon became known that there were but two persons in the pit, who were engaged as cupola attendants, and these were drawn out alive about six o'clock, fortunately being only slightly hurt. There were ten valuable horses in the pit, all of which were killed. Twenty sets of tools were generally employed in the night shifts; but on account of Wednesday being appointed by proclamation for a solemn fast and humiliation, the men working there did not descend the shaft as usual on the previous night, or, in all probability it would have been fatal to them. In another mine, close by, there were several men working the thin bed of coal, who heard the explosion, but, luckily for them, there was no communication between the pits. The explosion was so tremendous that it blew the plates and covers away from the immediate vicinity of the pit's mouth, and partly destroyed the conductors. It is supposed that it will take three weeks or a month to complete the repairs before work can again be commenced. Mr. Ainsworth, the under steward, questioned the two men, after they were drawn out, as to whether they had been out of their way, or could account for the explosion, but they either could not or would not say how it occurred. If this explosion had occurred during midday, when all were at work, it would have been almost as serious as the calamity at Lund Hill. —*Doncaster Gazette.*

## ROCKS AND MINERAL DEPOSITS OF NAMAQUALAND.—No. XII.

Hence the fact that bands of quartz, greenstone, &c., invariably occur in close vicinity to the larger deposits would lead us to infer that the occurrence of such isolating bands of quartz or greenstone, &c., running across the meridional grain of the country, is an indispensable companion of, if not an essential condition for, the formation of such deposits; and this is the more probable, as we notice that in those parts of the country where no such isolating bands occur there, also, no such deposits have been formed, although the fact of the very rock itself being strongly impregnated with and distinctly showing metallic contents, proves, on the one part, the richness of the country in metals, and on the other the readiness, as it were, of the rock to discharge its metallic contents.

Within the Kodas Basin, in which there occur the largest known deposits of Northern Namaqualand, there is also traceable a tendency to form east and west veins (such veins varying in breadth from a few inches to 2 or 3 feet); and many, and in their details very interesting, instances of the formation of such quartz veins may be noticed in that locality:—east and west veins frequently heaving north and south veins, &c.; in fact, an investigation of all the deposits of that country, the smaller and the larger ones, points invariably to the intimate connection that must exist between the development of east and west isolating bands and veins, and the development of metallic deposition, a greater or less development of the former being invariably accompanied by a corresponding greater or less development of the latter. Here the circumstance deserves to be noticed, that the richest deposits generally occur on the southern slopes of mountains; for example, Wheel Maria, Hester Maria Mine, Springbok (to the south of a quartz band); Kodas (though on the level of a broad valley, still on the north side of the river bed, and hence on the southern slope of the northern mountain ridge); N'Omies (all the deposits, with the exception of some insignificant ones, on the southern slope).

If the nature and extent of smaller deposits could at all be made to serve as a criterion for the nature and extent of the larger deposits, we should indeed be led to infer that all those larger deposits would in proportion extend only to the same depth as the smaller ones—that is, that the larger deposits would continue only by so much further in depth as they are larger and more extensive near the surface; and such a conclusion, although it may appear to a superficial observer as if it detracted from the value of such larger deposits, still, taking all the features that were observed in smaller deposits into consideration, would indeed serve to lead to a very high opinion with respect to such deposits. For instance, with respect to Springbok Mine, the several thousands of tons of rich ore which were cut out from that mine would indeed occupy an exceedingly insignificant place in our estimation; and all observations made in that mine, and analogous features observed elsewhere, lead me to infer that the main bulk of ore in that strangely-featured deposit has not at all been arrived at; and such is the case with several others of the larger mines.

In glancing once more over the whole country, we notice the following characteristic feature:—In Southern as well as Northern Namaqualand, we are struck by the uniformly barren aspect of the whole surface; standing, for example, on the top of a mountain, we see nothing but barren mountain masses all around us. Only the bed of the larger river beneath us is studded with numerous thorn trees, which, as if afraid of the frowning rocks all around, appear to cling anxiously to the course of the river bed, that river bed, owing to the dark foliage of its vegetation, affording a striking contrast with the glaring barrenness all around, and looking almost like a dark funeral procession, winding along amidst a labyrinth of gigantic gravestones, a solitary "kocheer-boom" roaring its dreary, leafless crown amidst huge blocks of rock, or a group of formidable looking "elephants trunks," guarding the approach to a schistose ridge.

[To be concluded in next week's Mining Journal.]

\* I noticed in North Namaqualand that north and south quartz veins were more frequently heaved by east and west veins than the latter by the former. The fact that a mineral may be broken into many fragments, and that every one of those fragments exhibits exactly the same characteristic properties which were exhibited by the whole piece before it was broken, &c., makes me inclined to think that a mineral vein may have been heaved asunder even when it was, perhaps, only an insignificant string, and that each of its portions might have continued increasing in size afterwards, notwithstanding the fracture: accordingly, the heaved and the heaving veins might be of nearly contemporaneous origin.

† A tree, resembling in appearance the *dracaena draco*.  
‡ An euphorbia, resembling in shape an inverted crozier, or an elephant's trunk, studded all over with large thorns, and growing to the height of 6 to 9 feet, its little crown of leaves being invariably turned to the north.

METALLURGY.—Dr. PERCY, F.R.S., will COMMENCE A COURSE OF FIFTY LECTURES ON METALLURGY, at Twelve o'clock, on Monday next, the 12th of October, at the GOVERNMENT SCHOOL OF MINES, Jermyn-street. Fee for the Course, £2. TRENHAM BECKS, Registrar.

MINERALOGY.—KING'S COLLEGE, LONDON.—Prof. TENNANT, F.R.S., will COMMENCE A COURSE OF LECTURES ON MINERALOGY, with a view to facilitate the study of Geology, and of the Application of Mineral Substances in the Arts. The lectures will be illustrated by an extensive collection of upwards of 3000 specimens, and will begin on Friday morning, 9th October, at Nine o'clock. They will be continued on each succeeding Wednesday and Friday at the same hour. Fee, £2 2s. R. W. JELF, D.D., Principal.

PARTNER WANTED, in an ENGINEERING ESTABLISHMENT in GLASGOW. The capital required is about £3000, though a larger sum might be employed to advantage. The income to be derived is handsome, and, as the business is an old one, and thoroughly established, this is an opportunity which is rarely to be met with.—For further particulars, apply to WALTER MACKENZIE, accountant, St. Vincent-street, Glasgow.

TO COLLIERY OWNERS AND OTHERS.—A YOUNG MAN, who has passed creditable examinations at a mining school, is desirous of an ENGAGEMENT TO ASSIST in the CONDUCT of COLLIERIES, or MAKE SURVEYS, and KEEP the PLANS.—Address, "R. H. Llanely, Carmarthenshire."

WANTED, in a LARGE IRONWORKS in SOUTH WALES, a MECHANICAL DRAUGHTSMAN; one accustomed to surveying could be preferred.—Apply, by letter, to "Z.," Mr. John Williams, Waterloo-street, Swansea.

WANTED, a MANAGER for TWO COLD BLAST FURNACES. He will be liberally paid, and have the entire control over the works.—Apply, by letter only to Mr. F. BARNARD, at Mr. Parke's, bookseller, Wolverhampton.

TO ANTIMONY SMELTERS.—WANTED, by a PRACTICAL SMELTER, the MANAGEMENT of a WORKS in the above line, or TRAVELLER to the same, having 16 years' experience, out of which 4½ years as manager.—Address to "C. H. H.," No. 8, Hercules-buildings, near the Savings' Bank, Lambeth-road, London.

TO SINKERS.—The DOWLAIS IRON COMPANY are prepared to receive TENDERS for SINKING TWO PITS on their property at DOWLAIS. The depths of the pits will be about 300 yards; they are now down 40 yards. The permanent winding engines are erected, and at work.—Application to be made at Dowlais Office, Dowlais.—Dowlais Ironworks, Oct. 8, 1857.

MINE AGENT.—WANTED, TO GO ABROAD (to a British colony), a SUPERIOR PRACTICAL AGENT, who is capable of carrying on, on his own responsibility, the works of an extensive mine, which is already making good returns. No one need apply who cannot give the first testimonials, and a person who has already filled a similar situation will be preferred.—Address, with testimonials and terms, Mr. J. H. MURCHISON, No. 117, Bishopsgate-street Within, E.C., London, up to Wednesday, the 21st inst.

NOTICE.—ANY PERSON GIVING INFORMATION as to the whereabouts of Messrs. WILLMOTT and CO., late of 68, Old Broad-street, formerly of 39, Lothbury, and will COMMUNICATE the same to the SUPERINTENDENT OF POLICE, STOUTPORT, WILL BE REWARDED.

LEAD FOR EXPORTATION.—PIG-LEAD (hard and soft) SOLD AT LOW RATES. The BEST PRICE given for LEAD ASHES, &c., and OLD LEAD.—ROUFALL and CO., Southwick Lead Works, Gravel-lane, London.

RED HEMATITE IRON ORE.—WANTED TO LEASE, a RED HEMATITE IRON ORE MINE. As the party intends working the property vigorously, the terms must be reasonable.—Apply, by letter, to "A. G.," Mr. Chas. Everett, news agent, 75, Old Broad-street, City.

SULPHUR ORE.—WANTED, a QUANTITY of SULPHUR ORE. Particulars to Hills and Co., Chemical Works, Warrash, Southampton.

STEAM BOILERS MADE BY WILLIAM WILSON, LILY BANK BOILER WORKS, GLASGOW, on the most approved principles, and delivered in all parts of England at moderate rates.

ON SALE, a 12-horse HIGH-PRESSURE HORIZONTAL STEAM-ENGINE, on iron bed, with fly-wheel, together with tubular boiler and iron chimney (requiring no brickwork), fittings and connections, complete. Also, TWO 4-horse HORIZONTAL ENGINES, one on boiler, with chimney, as above, and fittings, complete.—For particulars and price, apply to Messrs. E. and B. JOHNSON, Flockersbrook Foundry, Chester.

EDITORSHIP.—THE PROPRIETORS of a FIRST-CLASS SCIENTIFIC WEEKLY JOURNAL are desirous of securing the SERVICES of a thoroughly COMPETENT EDITOR. To a gentleman of undoubted ability, of energy and sound judgment, and in other respects equal to the duties of the position (an acquaintance with civil engineering and mechanics being a desideratum), a liberal and increasing rather than a moderate rate of remuneration would be accorded to.—Proposals will be entertained in the strictest confidence, and may be made without reservation, addressed "Editor," Oriental Club, Hanover-square.



**THE BOMBAY, BARODA, AND CENTRAL INDIA RAILWAY COMPANY** is prepared to receive TENDERS for RAILS, BRACKETS, TIE-RAILS, BOLTS AND NUTS, and WASHERS, on Adams's Patent Suspension Girder Principle. Drawings, specifications, and forms of tender, may be seen at the company's offices, upon which only tenders will be received.

Tenders to be sealed, and endorsed "Tender for Rails," addressed to the Directors of the Bombay, Baroda, and Central India Railway Company, and must be sent in at or before Twelve o'clock at noon on Thursday, the 15th day of October inst. The directors do not bind themselves to accept the lowest, or any of the tenders that may be sent in.

By order of the Board, Signed, C. H. KENNEDY, Secy.

Offices, 10, Liverpool-street, New Broad-street, London, Oct. 5, 1857.

**THE BOMBAY, BARODA, AND CENTRAL INDIA RAILWAY COMPANY** is prepared to receive TENDERS for SCREW JACKS. Specifications and forms of tender may be had at the company's offices, upon which only tenders will be received.

Tenders to be endorsed "Tender for Screw Jacks," and must be sent in at or before Twelve o'clock at noon on Thursday, the 15th day of October inst. The directors do not bind themselves to accept the lowest, or any of the tenders that may be sent in.

By order of the Board, Signed, C. H. KENNEDY, Secy.

Offices, 10, Liverpool-street, New Broad-street, London, Oct. 5, 1857.

**COPIAPO EXTENSION RAILWAY COMPANY.**—The concession having been obtained from the Government of Chili for the construction of the line, Notice is hereby given, that a MEETING of the shareholders in this company will be HELD at the office, 2, New Broad-street, on Friday, the 16th inst., at One o'clock precisely, for the purpose of authorising the immediate prosecution of the works. By order of the Directors, EDWARD J. COLE, Secy.

**TO IRONMASTERS AND OTHERS.—TO BE DISPOSED OF,** the LEASE of a valuable PROPERTY of IRONSTONE, LIMESTONE, and BRICK EARTH, with a wharf and short railway on the property, adjacent to, and connected with, the London and North-Western Railway, and Grand Junction Canal. For particulars, apply by letter, pre-paid, to "E. D.," care of Mr. Brown, No. 38, Chesapeake, London, E.C.

**IRONSTONE AND COAL, CARMARTHENSHIRE.—TO BE LET,** the numerous VEINS of excellent IRONSTONE and the COALS in the farms of CWM-HIDER, CWM-GRWYLLIO, and PEN-Y-GRAG, situated near Pont-y-bere, in the Gwendraeth Valley, and consisting of about 160 acres.

The whole of these veins are on the north crop of the lowest measures of this coal basin, and are well known to produce the best ironstone in South Wales. For particulars, apply to Mr. JOSHUA RICHARDSON, C.E., Neath.

**MINERAL DISCOVERY, AND TO LET.**—This month a LARGE MASS of DECAYED SPATHOSE ORE has been FOUND, close on the shore, easily wrought and shipped. The deposit is very large, 100 to 120 ft. wide, and extends, as seen, near a mile inland. The slag of what has been smelted (supposed by the Romans or Danes) lies in large quantities contiguous. THE COPPER ORES (Spathose, Hematite, &c.) advertised in this Journal of 5th September are still TO LET.—Apply to the proprietor, W. FOMTOW, of Ems, Loch Fyne, Argyshire.

**VICTORIA FOUNDRY COMPANY (LIMITED).**—This COMPANY having PURCHASED the premises known as the GREEN-WICH IRONWORKS, are prepared to FENDER both for REPAIRS and the BUILDING of every description of IRON VESSELS, either for steam or sailing purposes; also, the MANUFACTURE of BOILERS, IRON CASTINGS, STATIONARY or MARINE ENGINES, FLOUR and every kind of MILLWORK; also, the CONSTRUCTION of IRON LIGHT-HOUSES, &c.

THOMAS MEACHAM, Manager.

Victoria Foundry Company (Limited), Bridge-street, Greenwich, S.E.

**THE STEAM-ENGINE SUPERSEDED.** WATER, INSTEAD OF COALS, BEING THE IMPELLING POWER.—London Gazette, July 31, 1857. No. 1957: "To Jeffrey Kinsley, Lieut. H. P. 3d Dragoons, for the invention, &c." Proprietors desirous of saving fuel, whose mines are situated within the distance of ten miles from a river (with a moderate depth of fall), may receive an elaborate Treatise wherein the Engine is described. An engine, suitably constructed, may be supplied with water, the required information may be also imparted to the Civil Authorities. The services of Engineers and Agents are requested.—Apply to Inventor, Office, No. 9, South-west, Bedford-square, London: three postage stamps.

**GREAT CRINIS COPPER MINING COMPANY.**—Notice is hereby given, that, by order of the Committee of Management, a CALL of ONE SHILLING per share, on the NEW SHARES of this company, is NOW MADE, payable at the office, 27, Austinfriars, on Saturday, the 24th of October next.

By order, WILLIAM CHARLES, Secy.

London, Sept. 25, 1857.

**LIBERTY MINING COMPANY OF VIRGINIA.**

At the SPECIAL GENERAL MEETING, held at the London Tavern, on the 29th September last, it was resolved:—

That all holders of the original scrip shares of the old company who have not yet sent them to the office to be exchanged for shares in the present company, at the rate of one share for every five scrip shares, the holder taking at the rate of five per cent. thereon in preference shares, and who shall not do so within 21 days of this day, shall be deemed to have forfeited the same.

H. H. ROOD, Secy.

63, Moorgate-street, Sept. 30, 1857.

**THE GREAT BARRIER LAND, HARBOUR, AND MINING COMPANY (LIMITED).**—In 10,000 shares, of £5 each. Deposit, 10s. per share at the time of application, and 20s. per share upon allotment. Prospectuses can be obtained at the office, No. 117, Bishopsgate-street Within, London.

J. H. MURCHISON, Secy.

**DEVON GREAT ELIZABETH COPPER MINE.**

In 10,000 shares.—Deposit, £1 2s. per share. No free shares.

On the 10th CORCORAN PATENT.

8000 shares have already been taken, 20 tons of ore are now at grass, raised from a depth of less than 2 fms. of the surface.

No steam power required, there being an abundant supply of water at all seasons from the River Dart.

Applications for the remaining shares to be addressed to Mr. NICHOLSON, 57, Old Broad-street, where prospectuses can be obtained, and reports from experienced agents, as well as specimens of the ore, may be seen.

J. H. MURCHISON, Secy.

**LACKAMORE NEW MINING COMPANY (LIMITED).**

Capital £5000, in 2500 shares of £2 each.

£1 per share to be paid on allotment, the remainder by instalments of 10s. each, as required.

To be Incorporated and Registered under the Joint-Stock Companies Act, 1856, and Liability limited to amount of subscription.

MANAGING DIRECTORS.—Messrs. John Taylor and Sons.

Three other directors and two auditors to be appointed by the shareholders at the first general meeting.

SECRETARY.—Mr. W. Vernon Venables.

OFFICE.—6, QUEEN STREET PLACE, UPPER THAMES STREET, LONDON.

This company is formed under the Joint-Stock Companies Act, 1856, with limited liability, for the purpose of working the Lackamore Copper Mine in Ireland.

The mine, leases, buildings, machinery, materials, and ore broken, with everything in and upon the premises, were sold under an order of the Court of Chancery on the 2d April last, and were purchased by Messrs. John Taylor and Sons for £960.

The lease has upwards of 15 years to run, subject to the moderate royalty of 1-20th of the value of the ore sold.

The mine is well situated. It is in the county of Tipperary, about 15 miles from the Port of Limerick, and four miles from the town of Newrist, to both of which places there is an excellent road. The mine has been worked to a depth of 50 fms. below the adit level, and yielded considerable quantities of rich copper ore, the sales at Swansea from 1837 to 1850 showing that 3780 tons were sold for £32,400, and that the average produce was 10½ per cent. of fine copper. A fine stream of water runs through the mine, and a powerful water-wheel has recently been erected, for the purpose of draining the deepest workings. There is a good shaft, with a capstan, shears, and suitable pump work; also, an office and workshops, and houses for the agents. Operations having been resumed, sales of copper ore may be commenced at an early date, and sanguine expectations are entertained that the mine will soon leave a profit over the working expenses.

The liability of the shareholders is limited to the amount of £2 per share; the capital remaining, after paying £960 for the lease and plant, being deemed sufficient for carrying out the objects of the company.

Applications for the remaining shares to be made on or before the 15th day of Oct. inst., to Messrs. JOHN TAYLOR and SONS, No. 6, Queen-street-place, Upper Thames-street, London, E.C.

**WEST END MINE AND QUARRY OFFICES, 5, WATERLOO PLACE, PAUL MALL.**

**MESSRS. BRUNTON AND CO., ENGINEERS AND MINERAL SURVEYORS,** undertake the MANAGEMENT and WORKING OF MINES, QUARRIES, &c., and CONDUCT THE LONDON AGENCY of all MINERAL PROPERTIES in their offices with system, economy, and regularity.

Messrs. BRUNTON and Co. beg to inform proprietors of mines, &c., that the business of these properties is carried on in their office upon the following principles, viz.:

1. Accounts systematically and closely made up.

2. Statements in detail, and clear returns of income and expenditure.

3. Entire and impartial openness of books, reports, and documents, to all shareholders, for perusal or extract.

4. Immediate communication of any important occurrence to the shareholders.

5. MINERAL PROPERTIES SURVEYED, and ESTIMATES OF MACHINERY, PLANT, and COSTS OF WORKING FURNISHED.

**INVESTMENT.**—Messrs. FULLER and CO., 61, THREAD-NEEDLE STREET, LONDON, continue to TRANSACT BUSINESS in BANKING, MINING, RAILWAY, and OTHER SECURITIES, many of which will safely pay from 15 to 25 per cent. Those of a progressive character frequently rising above 100 per cent.

WANTED.—Alfred Consols, Botolph Claydon, Hingston Down, North Rocks, South Caradon, Wheel Margery, Edward, Ludcott, Tehidy.

Since calling public attention to twelve progressive mines, a rise has taken place of the following:—Craddock Moor, from £35 to £45, equal to £10,550; Calstock Consols, £24 to £34, or £2048; East Russell, from 10s. to £2, or £5000; W. Edwards, £4 to £9, being an increase in value of £16,000; Swanpool, £1 to £2½, or £2750; Total increase of value in three months of £37,598.

The following shares present equally as good prospects of success, and worth immediate attention:—

Devon Barro Barra, Tokenbury Consols, Great Wheel Bay.

Rolling Well, Dale (Limited), Drake Wells.

North Wheel Wrey, South Bog (Limited), West Wheel Edward.

B. East Providence, Whitechurch Down Consols.

Every information given, either personally or by letter.

P.S. PLUMBAGO.—FOR 2½ to 5 tons of PURE CUMBERLAND LEAD, samples of which may be seen at this office.

**BRIERLEY, STAFFORDSHIRE.—VALUABLE MINING PROPERTY.**

**MR. THOMAS NOCK WILL LET, UPON LEASE (with the sanction and authority of the Charity Commissioners for England and Wales), BY AUCTION, at the Station Hotel, in Waterbury-street, on Wednesday, the 14th of October, 1857, between the hours of Four and Six o'clock in the afternoon, subject to conditions to be then produced, ALL that FARM and LANDS situate in the township of Briery, in the parish of Sedgley, in the county of Stafford, with the DWELLING HOUSES and BUILDINGS thereon erected, and now in the occupation of Mr. James Evans, containing, by a recent survey and admeasurement, 17A. 2A. 30P., or thereabouts, for the term of 21 years, at the yearly rent of £51 as a surface rent, payable half-yearly during the said term; and also ALL the UNGOTTEN MINES of COAL, IRONSTONE, LIMESTONE, CLAY, and all other MINES and MINERALS lying and being in and under the said premises, with full power to get and dispose of the same, for the said term of 21 years.**

The minerals under the estate immediately adjoining to the above property are now being extensively worked by Mr. H. B. Whitehouse and others, and are of first-rate quality.—Further information may be obtained from Messrs. Potts and Gossom, solicitors, Bridgnorth and Broseley.

**VALUABLE FREEHOLD AND LEASEHOLD PROPERTIES, FIRE-BRICK MANUFACTORY, COLLIERY AND COKE WORKS, ENGINES, PLANT, &c., AT TOWER HILL, UPOLLAND, NEAR WIGAN.**

**MR. JOHN JEFFREYS WILL SELL, BY AUCTION (by order of the Assignees of Mr. John Cadman), at the house of Mr. Thomas Rigby, the White Lion Inn, in Upolland, on Monday, the 19th day of October, 1857, at Five o'clock in the afternoon, subject to such conditions of sale as will be then and there produced, ALL that FREEHOLD ESTATE, situate in Upolland aforesaid, and adjoining the highways from Upolland to Ormskirk and St. Helen's, containing 46A. 3A. 2P. of land, or thereabouts, with the valuable MINES OF COAL and BEDS OF FIRE-CLAY therein, and the COLLIERY and PLANT, STONE QUARRIES, and WORKS, lately belonging to Mr. John Cadman, and in his possession. And also, ALL the LEASEHOLD INTEREST of the said John Cadman, of and in the MINES OF COAL and BEDS OF FIRE-CLAY in the LOWER TOWER HILL ESTATE, in Upolland aforesaid, with the FIRE-BRICK MANUFACTORY and COLLIERY, lately worked by the said John Cadman, and the PLANT and EFFECTS thereon and thereto belonging. And also, ALL those FIVE FREEHOLD COTTAGES, with their appurtenances, situate fronting Fimbo-lane, in Upolland aforesaid, and now occupied by Henry Asper and others.**

The freehold estate contains valuable mines of coal, suitable for gas and coking purposes, and also beds of fire-clay and good quarries of stone, all which are now being worked.

The fire-brick manufactory has been established for some time, and the quality of the fire-clay and manufactured articles has ensured an extensive connection.

An inventory of the plant and effects may be seen at the works; at the office of JAMES CAZEMOVA, Esq., official assignee, North John-street, Liverpool; at the office of the auctioneer, in Ormskirk; or at the office of Mr. RALPH DARMSTON, solicitor, Wigan; where a plan of the property may be also seen, and further particulars obtained.

**MINING MACHINERY AND MATERIALS FOR SALE.**

**MR. GEORGE SEALY is instructed to OFFER FOR SALE, BY AUCTION, on Tuesday and Wednesday, the 20th and 21st days of October inst., at Eleven o'clock in the forenoon of each day, at TENBY MINE, in the parish of Menheniot, about three miles from the borough of Liskeard, the following very excellent MACHINERY and MATERIALS:—A 45 in. cylinder PUMPING ENGINE, 8 ft. stroke, with equal beam, boiler 11 tons, balance-beam and connections, complete; a 22 in. cylinder whirling engine, boiler 9 tons, fly-wheel 11 tons, winding cage, &c., complete; one spare boiler, 9 tons, nearly new; one large crusher, in excellent order; one portable crusher, used on dressing-floors.**

400 fathoms tramroad iron and wooden sleepers.  
4 tram wagons.  
12 ft. 9 in. pumps.  
2 11 ft. 9 in. workings.  
2 9 ft. 9 in. winders.  
2 9 in. doors and doorpieces, with seatings, complete.  
7 9 ft. 8 in. pumps.  
75 9 ft. 7 in. pumps.  
4 9 ft. 8 in. winders.  
4 8 in. H-pieces and doors.  
4 8 in. top doorpieces and doors.  
4 9 in. winding-barrels.  
4 9 in. winding-boxes and glands.  
5 12 ft. 7 in. plunger-poles.  
3 8 ft. 7 in. plunger-poles.  
5 bucket prongs, clacks, seatings, &c., complete.  
25 fms. 1½ in. bucket rods.  
130 fms. 7 and 9 in. main rods, with strap-pins, plates, bolts, staples and glands.  
140 fms. iron shaft ladders.  
200 fms. iron shaft ladders.  
Fires, stoves, hatches, kieves, round boulders, Brunton's frames, hand frame, and dressing tools of all kinds. Also, a large quantity of new and old timber, an excellent deal, and the second-hand furniture, &c.—Marston, Oct. 1, 1857.

**CAPITAL MACHINERY, STEAM-ENGINES, STEAM BOILERS, TOOLS, &c., WELL ADAPTED FOR RAILWAY ENGINEERS.**

**MESSRS. T. M. FISHER AND SON WILL SELL, BY AUCTION, on Wednesday, the 14th day of October, 1857, and following days, on the premises, in the occupation of Messrs. Dunn, Hattersley, and Co., the Windsor Bridge Ironworks, Pendleton, Manchester (sale to commence each day punctually at Eleven o'clock in the forenoon), the valuable MACHINERY, TOOLS, STOCK, and UTENSILS, comprising DUNN'S PATENT RETORT HIGH-PRESSURE STEAM BOILER; vertical high-pressure ditto, 10-horse power; ditto, 8-horse, and ditto, 5-horse power; six high-pressure steam-engines, from 5 to 12-horse power; 7 in. and 9 in. single speed lathes; two 9 in. ditto, and one 9 in. ditto, on bed 15 ft. long, with break; two 8 in. double-gear hand lathes, one 9 in. ditto, and one 10 in. ditto, with 11 in. ditto, three 13 in. ditto, and one 14 in. ditto, all with face-plate, rests, and driving apparatus; one 2 in. double-gear slide lathe, bed 13 ft. long; one 11 in. slide and screw cutting lathe, bed 14 ft. long; two 12 in. and one 14 in. ditto, bed 24 ft. long; one 13 in. ditto, bed 15 ft. long; one 24 in. ditto, bed 26 ft. long; and one 24 in. ditto, bed 30 ft. long, with break to take in 5 ft. diameter, with face-plates, compound slide rests, hand rests, stays, chucks, and driving apparatus; planing machine, bed 28 ft. 6 in. long; ditto ditto, 26 ft. long; ditto ditto, 20 ft. 6 in. long; and ditto ditto, 6 ft. long; self-acting in the vertical, angular and horizontal cuts; three double vertical machines, with self-acting motion to spindles, and double power gearing; horizontal boring machine, with 10 in. double geared headstock, and ditto with 12 in. ditto, 10 ft. long; eight vertical and one horizontal drilling machines, with double power gearing; two slotting machines to take in 2 ft. 6 in. diameter, and cut 6 in. deep; and one large ditto, to take in 5 ft. diameter, and cut 1 ft. 6 in. deep, with compound and circular table and self-acting motion; shaping machine, 4 ft. bed, 10 in. stroke; ditto, 5 ft. bed, 12 in. stroke; shaping and planing machine, and double shaping machine, bed 20 ft. 4 in. long, 1 ft. 6 in. stroke, self-acting in all the cuts, two beds with separate motion and setch box to disengage either bed, and two movable tables for cutting longitudinally; screwing machine, with tape and dies, from ½ in. to 2 in. diameter; wheel-cutting engine, to take in 3 ft. diameter; powerful shearing and punching machine, by Lewis; lever punching machine; shearing machine, to cut centre of plate, 40 in. wide; plate-bending machine, with three rollers, each 12 in. diameter, 9 ft. 2 in. wide; rivet-heating furnace, four portable rivet hearths, each with pair of circular bellows; Garforth's patent riveting machine, and wood tower for same, with double purchase 10 tons crabs; pair of 3-shaft crabs and chain; furnace for heating long bars and plates; pair of 5 and 4 shafted blocks for 30 tons; six 10 tons and twelve 5 tons match blocks; universal travelling crane, with 10 tons treble-purchase tabular crabs; two ditto, with double purchase crabs; and two ditto with single-purchase crabs, all with railways, chains, blocks, and pulleys; two single-purchase and two double-purchase crab cranes; a 10 ton crane, with jib, spur, and carriage; a 10 tons crab crane; wrought-iron crane jibs, and spurs; vice and fixtures benches; 27 vices, from 5 in. to 6½ in. jaws; seven parallel vices, from 6 in. to 7½ in. jaws; cast iron portable vice bench, with eight drawers, and 6 in. vice; tool boxes; turning, fitting, and boring tools, files, 16 smiths' hearths, with two irons, castles, slake troughs, anvils, sawage blocks, smiths' tools, Schiele's 33 in. patent fan, three smiths' cranes, six cast-iron hoods, and four clatters for smelting iron; three cast and wrought-iron mandrel racks, two surface plates, 20 tons steel-yard; 5 tons ditto; four 6 in. water cranes, each with brass valve, swan neck, balance bowl, stove, grate, and gearing for opening the valve from the tender; three 6 in. water cranes, each with brass valve, swan neck, balance bowl, and gearing for opening the valve on the ground; six 3 tons treble-purchase warehouse cranes, four pair of shear legs, Bodmer's pumping engine, hydraulic press, 9 in. ram; portable rail bending machine, on four wheels; three screw jacks; two rack jacks, indicating lever and testing chain; three bending bowls, two hoop mandrels, three face-plates, Dunn's patent wrought-iron main road turntable, 13 ft. 6 in. diameter, 4 ft. 6 in. ditto beam ditto, 13 ft. 6 in. diameter; ditto ditto, 40 ft. diameter, with gearing for turning; wrought-iron curb, foundation rings and chairs; and surface turntable, 18 ft. diameter, all for 4 ft. 8 in. gauge; two patent cast-iron hopper, traversers, 10 ft. long, 4 ft. 8 in. gauge; eight pairs of wheels for railways, 4 ft. 8 in. gauge; Banks's patent break, old tender, well seasoned cart-felloes, four logs of sound pine timber, eastings, ladders, trucks, bogies, four carts, boiler carriage, lorry, wagon, timber bolster, grey horse, set of shaft gears, counting-house and store room fixtures, &c.**

Catalogues will be published on the 7th of October, and with any further required particulars may be had from the auctioneer, 10, Tib-lane; or from Mr. WILLIAM BROOMS, accountant, Norfolk-street, Manchester.

**VALUABLE MINING SETT TO BE LET immediately, on fair terms, situate in the parish of Llandinog, in the county of Carmarthen, and within one mile of the Llandovery Railway Station. The sett consists of two square miles, or thereabout. It is evident that there are several SILVER-LEAD LODES running through this valuable sett about two miles in length. There are some old workings to be seen on the sett, which have been worked in times out of memory; yet an old man can be found who remembers lead ore carried away from the said old workings about 80 years ago. In the year 1855, a small trial was made on the main lode. A shaft was sunk on the top of the hill about 6 fms. deep; the lode in the bottom of the shaft is about 10 ft. wide, composed of blue flint, full of small lead, and the other part of the lode is composed of spar and first-class red gossan, with strong spots of lead in the spar, and the water built up through the large rugged too quick to make speed in sinking. A deep adit has been commenced on the course of the lode, and has been driven about 4 fms. The lode in the present end is 4 ft. wide, composed of blue flint and spar, with spots of malleable silver-lead ore, looking very kindly; and by continuing this level 30 fms. more it would gain 30 fms. of back, and by continuing another 30 ft. it will be under the shaft, where the ore has been found, and it would gain another 20 fms. of back to stop away, and there is not a doubt but that this lode will produce abundance of silver-lead ore in that depth. There are many other lodes and branches running through this valuable sett, too numerous to mention in this advertisement.**

Every encouragement is given to a respectable company by the proprietor of the land. The sett company abandoned the mine for want of capital to carry on the operations.—Applications to be made to the proprietor, GEORGE JONES, Esq., Paradise Hall, near Llandovery.—Sept. 26, 1857.

**PENANCE, CORNWALL.**

**IMPORTANT AND EXTENSIVE MANUFACTURING PREMISES,** Held at a ground rent; bounded by the sea wall; in the occupation of the London and Penance Serpentine Company; also, THE VALUABLE PLANT AND MACHINERY, THE STOCK IN TRADE, AND THE LEASES OF SIX QUARRIES.

**MR. BOYES** has been instructed by the Official Liquidator (appointed by the Court of Chancery to wind-up the above company) to SELL, BY AUCTION, at Garraway's Coffee House, London, on Wednesday, the 21st inst. (instead of the 20th September, as previously advertised), at Twelve o'clock, the above valuable PROPERTY.

The PREMISES are extensive, and have been built with stone during the last four years in the most complete and substantial manner, at a cost of several thousand pounds. They contain a noble show room, factory, masons' and turners' shops, polishing, engine, and store-rooms, smithy, boiler-house, large shed, yard, &c. Also, a desirable PLOT of BUILDING LAND, having a frontage of about 400 ft. The MACHINERY is of the best description, and in excellent working condition, and will be sold with the lease. It consists of two high-pressure steam-engines, eleven turning lathes, expensive sawing frames, &c.

The purchaser of the lease and plant will have the option of taking the stock of serpentine stone and Silurian marble, consisting chiefly of chimney-pieces, at Penance and London, or either, at a fair valuation. To any party desirous of embarking in this business, a most desirable opportunity is hereby offered; but the premises, from their extent and eligible situation, and from their possessing every modern improvement, offer unusual advantages for many other manufacturing purposes.

A plan and elevation may be seen at the auctioneer's offices. The premises, plant, and stock may be viewed on application to Mr. BRADSHAW, on the premises. Particulars may be had there; of Messrs. CURTIS and ABE, solicitors, 48, High-street, Southwark; of H. SACRETT, Esq., official liquidator, 54, Basinghall-street; both in London; at the principal hotels at Plymouth and Truro; at Garraway's; and at the auctioneer's offices, 55, Abchurch-lane, London.

**SOUTH WALES.—MR. ARTHUR O. DAVIES, of Dowlais, is**

authorised to TREAT for the SALE of TWO VERY VALUABLE GOING COLLIERIES in South Wales.

Also, TO LET, an EXTENSIVE TRACT of STEAM COAL, on a long lease, at a moderate royalty, with a railway running through the property. For terms, apply as above.

**TO COPPER SMELTERS, OR OTHERS REQUIRING**

EXTENSIVE MANUFACTURING PREMISES.—TO BE SOLD, the PEN-CLAWDD COPPER WORKS, situate on the banks of the Barry or Loughor River, about eight miles from Swansea, and five from the Loughor Station on the South Wales Railway. The buildings, which are most substantially erected, are entirely enclosed by a wall. The premises occupy altogether about 8 acres of ground, and are held under a lease for 60 years from 25th December, 1847, at the nearly nominal rental of £100 per annum. The wharfage is most convenient, and the dock is capable of accommodating vessels of 300 tons.—For further particulars, apply to Mr. W. A. HAY, at the Office of the Holyford Mining Company, 16, New Broad-street, London.

**TO LEAD MINERS AND OTHERS.—LEASEHOLD MINE.**

FOR SALE, BY PRIVATE TREATY, the PENYRHENLAS MINE, situated in the parish of Holywell, in the county of Flint, held under the Marquis of Westminster, at a moderate royalty, for the unexpired term of eleven years, together with a 45 in. CONDENSING ENGINE, and all other requisites necessary for carrying on the working of the mine.—For further particulars, apply to ADAM STOKES, Esq., Llanerchymor, near Holywell; or to the agent, Mr. HUNT.—Oct. 3, 1857.

**WEST SORTRIDGE CONSOLS.—FOR SALE, BY PRIVATE**

CONTRACT, the above MINE, in the parish of Whitechapel, Devon, together with ALL the MACHINERY and MATERIALS thereon, comprising a WATER-WHEEL, 15 ft. in diameter and 7 ft. breast; first-class 8-headed shafts; balance-bob; travelling-bob; shaft-bob; line of flat-rods (about 35 fms.) of ½ in. crows iron, with pulleys, complete; piece of 6 in. main rod; 200 fms. tram iron, 2½ in. by ½; 35 fms. whim-rope; 14 fms. ½ in. chain; 2 whim-kibbles; 7 spare stamps; lifters; wood rests, &c.; about 7 or 8 cwt. of east-steel rollers; about 3½ cwt. of powder; and sundry other articles, for which see catalogue.

The above mine adjoins the celebrated Sortridge Consols Mine on the west, the discovery just made in the 40 west at which is looked upon as affecting most favourably the West Sortridge sett, and adjoins Wheel Franco, which has also made good returns, and is in the immediate neighbourhood of North Wheel Robert, now making large returns.

The present adventurers have expended a considerable sum in laying open the lode, and several hundred pounds worth of tin ore have been sold, but a number of the shareholders not paying their calls obliges the company to offer this promising mine, with the machine, &c. Many of the present shareholders have been desirous of joining a new company, as they believe that with a small additional expenditure important discoveries will be made.

Every information, orders to inspect, and catalogues, may be obtained of J. H. MURCHISON, Esq., 117, Bishopsgate-street-within, London.

**LEAD AND ZINC MINE FOR SALE, IN THE ASHBURTON**

DISTRICT, DEVON.—TO BE SOLD, BY PRIVATE CONTRACT, a valuable LEAD and ZINC SETT, granted in 1852 for 21 years, now in full work, and well found, with two steam-engines, one of 20 in. cylinder, and 6 ft. stroke, for pumping, and the other of 10 in. cylinder, with multiplying gear, for crushing and beating, with a powerful crushing machine attached (a boiler of about 11 tons supplies both engines with steam); 80 fathoms of pumps, varying from 10 in. to 7 in., and a 7 in. plunger-pole, kibbles, chains, and a variety of articles necessary to the working of the mine, all in first-rate condition.

The sett is extensive; does 1-16th; engine-shaft 80 fms. in depth. Zinc abundant, and experienced authorities consider lead must be found equally so, either in depth, or in some of the levels, and the sales of ores exceed £8000. There are several other lodes in the sett not yet explored.

For full particulars, and to treat for the purchase, apply to W. L. WELLS, Esq., Great St. Helen's, Bishopsgate-street, London; or to Messrs. D'ARCY and BRADSHAW, solicitors, Newton Abbott.—Dated Newton Abbott, Oct. 8, 1857.

**IRONSTONE NEAR WHITBY.—TO BE SOLD, BY PRIVATE**

CONTRACT, a FARM, underlain by a valuable SEAM of excellent IRONSTONE. The property is intersected by the railway, and the stone has been worked for a considerable time in the adjoining land.—For further particulars, apply to Mr. BOWLER, land surveyor, Whitby.

**GAMORGANSHIRE.—COLLIERY FOR SALE.—FOR SALE**

BY PRIVATE CONTRACT, an unexpired term of about 45 years, of all that important COLLIERY, and the MACHINERY and PLANT thereon, being long known as the HAFOD COLLIERY, and situate in the Rhondda Valley, in the parish of Llanwano, in the county of Glamorgan. This colliery produces coal well adapted for domestic and manufacturing purposes, and a coking coal of the very best quality. It is in direct communication with the Port of Cardiff, by the Taff Valley Railway, and with all the important ironworks and manufactories in the district which are in communication with that Port. It is distant from the Port of Cardiff sixteen miles, and from the town of Pont-y-pridd about three miles.—For further particulars, and to treat, apply to Mr. SAMUEL DOWSON, mining engineer, Tredegar, Pont-y-pridd.

**SALE OF VALUABLE ROCK BORING MACHINERY.**

Her Majesty's Principal Secretary of State for War hereby gives notice, that TWO SETS of PENRICK'S PATENT ROCK BORING MACHINERY, with TUBULAR STEAM BOILERS, and DONKEY FEED PUMPS, WILL BE SOLD BY PUBLIC AUCTION. This machinery was made for the purpose of boring under Sebastopol, but the war having terminated before the apparatus was completed, it has not been used.

This machinery is now lying in the Yard of the Small Arms Department, at the Tower, Barge-street, Birmingham, and may be viewed on any day between



# PREVENT SMOKE AND INCREASE STEAM.—PATENT REGULATING AIR-DOOR, FOR MARINE AND STATIONARY STEAM-BOILERS, AND FOR LOCOMOTIVE AND OTHER FURNACES.

**CERTIFICATE FROM HIS HONOUR THE LORD CHANCELLOR.**  
 London, July 25, 1857.—The action of your Patenting Air-Door at the Royal Mint Gold and Silver Refinery is very satisfactory as regards the smoke. They also get up steam in the boilers quicker and maintain it better than before; and they afford the means of raising or lowering the heat in the refinery furnaces as the work may require. Your invention, in fact, deserves every encouragement and recommendation. Signed, J. Lee Stevens, Esq., 1, Fish-street-hill. A. ROTHSHILD.

For further particulars respecting the Patent Regulating Air-Door, and the Patent Safety Marine Boiler; and with reference, also, to his Patent Land Furnaces, Domestic Stoves, and other inventions comprised in his System of Smoke Prevention, apply to Mr. JOHN LEE STEVENS, 1, Fish-street-hill, City, London (E.C.), where a great variety of models and drawings may be seen, and reports and testimonials obtained.

**OVERLAND ROUTE.—STEAM TO INDIA AND CHINA.** &c., &c., &c.  
 The PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS AND RECEIVE GOODS AND PARCELS for the MEDITERRANEAN, EGYPT, ADEN, BOMBAY, CEYLON, MADRAS, CALCUTTA, THE STRAITS, and CHINA, by their steamers leaving Southampton on the 4th and 20th of every month.

For further particulars, apply at the company's offices, No. 123, Leadenhall-street, London; and Oriental-place, Southampton.

**TO COLLIERY OWNERS.—SAFETY with ECONOMY in using MOZARD'S PATENT IMPROVED SAFETY MINING LAMPS,** which give a brilliant light and prevent explosion, as the lamp cannot be opened without extinguishing the light; and for twelve hours burning the cost does not exceed 1d.—Manufactured by H. MOZARD, 31, Berwick-street, Soho, London.

Agents wanted for various districts.

**CONDIE'S PATENT STEAM HAMMERS.**—FIRST-CLASS STEAM HAMMERS, from 10 cwt. to 7 tons, suitable for jobbing, puddling, forging, engineering, ship-builders, wagon builders, smiths, &c., made under the subscriber's personal superintendence. JOHN CONDIE, Glasgow.

**MESSRS. R. & J. COUPE, ENGINEERS AND IRONFOUNDERS,** MANUFACTURERS OF HORIZONTAL HIGH-PRESSURE STEAM-ENGINES, from 10 to 200-horse power; the largest description of engines mounted with their improved EQUILIBRIUM SLIDE PISTON VALVE, which has proved itself so eminently adapted for winding and other engines.

Clayton Foundry, Wigan.

**TO IRONMASTERS, ENGINEERS, AND FOUNDERS.**—THE HARRINGTON IRON COMPANY are now PREPARED TO SUPPLY MELTING AND FORGE PIG-IRON, made from the rich HEMATITE IRON ORES of CUMBERLAND.—Address, HARRINGTON IRON COMPANY, Cumberland.

**TO IRONMASTERS.—GAUNTLETT'S PATENT PYROMETER,** OR HEAT GAUGE FOR HIGH TEMPERATURES.

Ever since the important invention of heated blast in the smelting of metallic ores was brought into general use, the want of an accurate and durable thermometer for indicating the heat of the blast has been generally experienced. That want is now supplied by this instrument.

TO ADVANTAGE consists in its capability of INDICATING HIGH TEMPERATURES beyond the reach of the ordinary mercurial thermometer. Its extreme sensitiveness, and the precision with which it registers high temperatures, renders it invaluable as an appendage to the heating stoves of blast furnaces. The fireman, guided by its indications, is enabled to MAINTAIN A UNIFORM TEMPERATURE in the stove (an important matter in blast furnace operations), whereby a considerable saving of fuel may be effected, both in that used to heat the stove, as well as that which is consumed in the furnace to smelt the minerals. These gauges are supplied only by W. J. LEWIS, Middlebrough-on-Tees.

**STEAM PUMPS, FOR LAND AND MARINE PURPOSES,** SINGLE OR DOUBLE ACTING; sizes from 2½ to 12 in. diameter, and from 4 to 18 in. stroke; by JOHN CAMERON. Used for feeding boilers, raising water (for reservoirs, tanks, irrigation, &c.), turning power, or as a steam fire engine. Works, Egerton-street, Hulme, Manchester.

**SHAFTING, SHAFTING, SHAFTING.** ROLLERS, ROLLERS, ROLLERS. SPINDLES, SPINDLES, SPINDLES. AXLES, SCREWS, MANDRILLS.

THE BEST MAKER IS HARRY BENTLEY, EAGLE WORKS, SALFORD, MANCHESTER.

N.B. Every description of Turning, Planing, Boring, and Screw-Cutting.

**THOS. GEMMELL AND CO., WIRE ROPE MANUFACTURERS,** WORKS, FERRILL ROAD, SPRINGBANK, GLASGOW.

WAREHOUSES: Finnieston Quay, Glasgow; 10, King-street, Liverpool; 45, Marlborough-street, Aberdeen; 46, Osborn-street, Hull.

AGENTS: HENRY J. MORTON AND CO., 2, Basinghall-buildings, Leeds. GEORGE OUTRIM, Liverpool-road, Stoke-upon-Trent. ISAAC NAVLER, Didsdale, near Dudley. J. WADSWORTH, 109, Millgate, Wigan. THOMAS REID, 33, Quay-side, Newcastle-upon-Tyne.

**ARNOLD AND SONS, WIRE WORKERS, WEAVERS, AND IRONMONGERS TO HER MAJESTY.** Nos. 9, 12, and 13, FORT STREET, DEVONPORT, DEVON.

ARNOLD AND SONS being MANUFACTURERS OF WIRE WORK, can with confidence ensure the strongest and best quality goods to all who entrust orders to their care. MINES SUPPLIED WITH Brass and Iron Wire Sieves, Brass Machine Bottoms, Iron Cylinder Sifts, Copper Bottoms, Stamp Grates, Delivering Sieves, &c.

MINING MATERIALS of every description supplied on the best terms. Price Lists sent on application.

ARNOLD AND SONS have a very extensive Stock of Furnishing, Navy, Army, and General Ironmongery.—Devonport, Three Doors above the Post-office.

**PATENT WIRE ROPES, ONE-HALF THE COST OF HEMP ROPES.**—HENRY J. MORTON AND CO. (No. 2, BASINGHALL BUILDINGS, LEEDS) PATENT WIRE ROPES, for the use of MINES, COLLIERIES, RAILWAYS, &c.; one-half the weight of hemp ropes, and one-third the cost; one-third the weight of chains, and one-half the cost—in all deep mines these advantages are evident. References to most of the principal colliery owners in the kingdom.

GALVANIZED SIGNAL CORDS AND KNOCKER LINES; will not rot or corrode, and not affected by the copper water in mines. Very strong, and not at all liable to break. Prices from 15s. per 100 yards.

**CROGGON'S PATENT ASPHALTED ROOFING FELTS,** 1d. per foot. DRY HAIR BOILER FELTS, to save COAL. PATENT BOILER COMPOUND, for bad water. FAIRBANK'S WEIGHING MACHINES, of all sizes. PATENT FLEXIBLE STEAM PACKING, 1s. 6d. per lb. PATENT METALLIC PACKING, 4s. per lb. PATENT AMERICAN DRIVING BANDS, much cheaper and more durable than leather. PATENT GALVANIZED AIR-PIPES, for ventilation.

STOCKS OF MINING AND RAILWAY STORES in Liverpool and London:—viz. OILS, GREASES, COTTON WASTE, SPUN YARN, WHITE LEAD, VARNISHES, &c.; and at very low prices.—Address, 2, Basinghall-buildings, Leeds. N.B. Illustrated price list on application.

# RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM. BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS, IN STOCK—FOR SALE OR HIRE.

**THE RAILWAY CARRIAGE COMPANY,** OLDBURY, NEAR BIRMINGHAM. MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND IRONWORK.

NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK, FOR SALE OR HIRE.

**THE PERMANENT WAY COMPANY GRANT LICENSES** for the USE of the following valuable PATENTED INVENTIONS, adopted on numerous railways at home and abroad, to the extent of upwards of 9000 miles:—

**CAST-IRON SLEEPERS.**  
 De Buge's Patent. P. W. Barlow's Patent. W. H. Barlow and W. H. Woodhouse's Patent. W. H. Barlow's Patent. Samuel's Patent. Sir John Macneil's Patent. Mills, &c., Patent.

**WROUGHT-IRON PERMANENT WAY.**  
 W. H. Barlow's Patent. Macdonnell's, &c., Patent.

**IMPROVED JOINTS AND JOINT FASTENINGS, &c.**  
 Adams and Richardson's Fish-Joint. Pole's Tapped Fish-Joint. Wild's Grooved Fish-Joint. Woodhouse's Improved Joint. Barnham's Improved Joint. Mansell's Improved Joint. Macdonnell's, &c., Patent. Bridgewater's Improved Spikes. May and Prince's Improved Spikes. Keeling's Joint Fastenings. Ballou's Joint Fastenings. Prince's Chair Moulding Process.

**TIMBER PRESERVING.**  
 Dr. Boucherie's Process. Barlow's Improved Process.

Every information as to description, cost, &c., of these various plans may be obtained on application to WILLIAM HOWDEN, Sec. 26, Great George-street, Westminster.

**BURGIN AND WELLS, STEEL CONVERTERS AND REFINERS,** MANUFACTURERS OF RAILWAY CARRIAGE AND WAGON SPRINGS, IMPROVED CAST STEEL FILES, &c. HOLLIS CROFT STEEL WORKS, SHEFFIELD.

**JOHN H. PECK, MANUFACTURER OF RAILWAY OIL COVERS, CART AND WAGON COVERS, OIL CLOTH, STACK COVERS, BOAT SHEETS, TARPULIN, BRATTICE CLOTH, COKE AND CORN SACKS, POTATO BAGS, TWINE, &c., WIGAN.** LONDON AGENT.—T. E. WHEELER, 15, Duke-street, Adelphi.

**W. M. RYDER, GENERAL MINERAL AND METAL AGENT** AND MERCHANT, No. 4, DEAN STREET, NEWCASTLE-ON-TYNE, is prepared to SUPPLY any description of IRON or IRON GOODS, MACHINERY of every description, CHAINS, ANCHORS, and FORGED or FOUNDRY WORK, COALS, COKE, FIRE-BRICKS, &c. All communications addressed to him as above shall have prompt and careful attention.

**WILLIAM FOX AND SON, METAL AGENTS, No. 39, OLD HALL STREET, LIVERPOOL, SOLE AGENTS IN LIVERPOOL for the SALE of the following makes of IRON:—**

DAWE AND SON'S. MILTON AND ELDERMAN. JOHN MARSHALL'S. PLANT AND FISHER'S. BROUGHTON HALL. DANIEL ROSS'S.

EVERY DESCRIPTION OF IRON ALWAYS ON SALE. Also, TIN-PLATES, WIRE, RAILWAY SPIKES, &c.

**MUNTZ'S PATENT SOLID ROLLED BRASS TUBES,** FOR LOCOMOTIVE AND MARINE BOILERS.

G. F. MUNTZ begs to state that, in consequence of the satisfactory results obtained during the five years these tubes have been in use, the following railway companies have entered into contracts to USE the PATENT TUBES exclusively on all their lines, viz:—

The London and North-Western Comp. The Lancashire and Yorkshire Company. The Midland Company. The Lancashire and Carlisle Railway Company. These tubes are also very extensively used on all the other principal railways at home and abroad, and for marine purposes by Her Majesty's Navy and several of the leading steam-packet companies, and also by all the eminent engineers of the kingdom.

G. F. MUNTZ takes this opportunity of stating that the tubes now manufactured are very superior, both in finish and quality, to those formerly produced in the early stage of the patent.—French Walls, Birmingham, April, 1857. GEO. RICHARDSON AND CO., Agents, 10, Craig's-court, Charing-cross, London.

**CALVERT'S PATENT PROCESS FOR MAKING COKE AND IRON FREE FROM SULPHUR.** FOR LICENSES TO USE the above process, apply to ROBERT LONDON, JUN., 63, King-street, Manchester.

FOR APPLICATION OF THE PATENT TO GAS WORKS, apply to Mr. GEORGE TRICKETT, Exchange Chambers, Manchester.

**SHEET ZINC AND SPELTER.—ACTON BRIDGE ZINC ROLLING MILLS, NEAR NORTHWICH, CHESHIRE.** SHEET ZINC, out of the best selected SILESIA SPELTER, refined and rolled at these mills, CONSTANTLY ON HAND, of all usual gauges, or rolled to order any practicable length, width, or thickness, to suit purchasers, on moderate terms. Also, TELEGRAPH PLATES, SHEATHING FOR VESSELS, &c. OLD ZINC and SHEATHING PURCHASED. SILESIA SPELTER ON SALE.—Apply to the Manager, at the Mills; or at the office, 3, Harrington-street, Liverpool.

**SHORTTRIDGE, HOWELL, AND JESSOP, HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS OF HOWELL'S PATENT HOMOGENEOUS BOILER-PLATE METAL,** combining the strength and durability of steel with the malleability of copper; warranted to bear double the pressure of the best boiler-plate iron; RIVETS, ANCHORS, and STAYS of the same material. Also, RUSSELL AND HOWELL'S PATENT CAST-STEEL TUBES, for multibore boilers, shafting, railway axles, &c.—Application to be made to SHORTTRIDGE, HOWELL, and JESSOP, Hartford Steel Works, Sheffield; and Messrs. HARVEY AND CO., No. 12, Haymarket, London.

**WALKER'S PATENT DRY STAMPING MACHINERY,** adapted for every kind of ORES. The success of those in use show that the work is done QUICKER, the stuff FINER, and will be found invaluable for EXTRACTING GOLD AND SILVER.—Factory, 17, Cowper-street, City-road, where everything for mining purposes can be obtained.

**DISINTEGRATION AND SEPARATION OF SULPHUR FROM AURIFEROUS AND ARGENTIFEROUS PYRITES.** OWNERS OF MINES containing this mineral are hereby apprized that P. A. GODEFROY'S APPARATUS for the above PROCESS, under his patent, is NOW AT WORK, and that he is prepared to operate on a ton weight, or less, of matrix holding such pyrites, by which it is purified and rendered fit for smelting or amalgamation without being calcined; and a trial of the ore to this extent will cheaply and correctly ascertain its value in the precious metals.

King's Mead Cottages, New North-road, Oct. 1, 1857.

**IMPROVED GUTTA PERCHA.—P. A. GODEFROY'S PATENT.**—Engineers of telegraph lines, and all others concerned in the gutta percha manufacture, are invited to ENQUIRE into the MERITS of this COMPOUND, which is proved by comparative testing to be manifestly superior in elasticity, durability, independence of atmospheric influences, and striking economy, both in first cost, and power of endurance in every way.—Address the Patentee, 3, King's Mead Cottages, New North-road, Islington.

**PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE MEDAL** was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and PRYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate. Address.—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckermill, Cornwall.

**SAFETY FUSE.**—Messrs. WILLIAM BRUNTON AND CO., PENHALICK, near REDRUTH, CORNWALL, MANUFACTURERS OF FUSE of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe. Messrs. BRUNTON AND CO. are at all times PREPARED TO EXECUTE UNLIMITED ORDERS for SUPPLYING FUSE direct from their own MANUFACTORY, upon warrant that it will prove equal to, if not better, than any to be procured elsewhere.

# MESSRS. KNOWLES AND BUXTON, CHESTERFIELD, MANUFACTURERS OF PATENT TUBULAR TUYERES, FOR HOT BLAST FURNACES, SMITHS' FORGES, &c.



**PATENT TUBULAR TUYERES.**  
 Messrs. KNOWLES AND BUXTON can with confidence bring before the public their IMPROVEMENT in TUYERES, having proved their utility at Mr. Knowles's furnace, Birmingham Moor, as well as at other furnaces in the surrounding neighbourhood. They are now perfectly satisfied that one trial will be sufficient to convince all practical furnace managers that they are the CHEAPEST and BEST ever offered to the public. The annexed diagram shows the principle to be both simple and efficient, conveying a current of cold water direct to the nozzle of the tuyere, which is made of thin tubing (without the incumbrance of cast-iron), allowing the cooling property of the water to act direct upon that part most exposed to the fire, and is sufficient to keep the liquid metal from adhering to the tuyere, which is not the case with those generally in use. After taking into consideration the first cost, and the advantage of being able to work them longer without the loss of time in replacing, or injuring the metal, they will be found, after a fair and impartial trial, to be most decidedly a great advantage to furnace proprietors.

Messrs. KNOWLES AND BUXTON are prepared to SUPPLY hot-blast furnace tuyeres, with sockets, at 36s. each; without sockets, at 35s. each; smiths' forge tuyeres, at 15s. each; delivered at Chesterfield Station.

**PATENT STEAM PACKING, VULCANIZED INDIA RUBBER, &c.**  
 TUCK'S PATENT ELASTIC PACKING AND PATENT METALLIC LININGS, FOR STEAM-ENGINES, PUMPS, &c.

ADVANTAGES.—A more perfect vacuum is obtained, friction reduced, great saving in oil and tallow, and the packing is gradually and completely worn away without becoming hard, thus obviating the necessity of drawing the old packing.

Orders received for the Patent Packing, also for Vulcanized India Rubber, in sheets, valves, &c., at the Offices of the Patent Steam Packing Comp., 47, Mark-lane, E.C.

**PORTABLE STEAM-ENGINE COMPANY.**

PORTABLE STEAM-ENGINES TO BE SOLD, with gear, or TO LET ON HIRE, from 5 to 25-horse power. —Apply to CRESSWELL HALL, Offices, 6, Mincing-lane (E.C.).

**PATENT PORTABLE MINING ENGINES.**

These ENGINES have been SUCCESSFULLY EMPLOYED for years in PUMPING AND WINDING, in every part of the United Kingdom, and a LARGE STOCK IS NOW READY FOR DELIVERY, either to rent or purchase, from 4-horse to 40-horse power.

Apply to Mr. T. CRESSWELL, engineer, 92, Blackfriars-road.

JOSEPH CRAWHALL. EXHIBITION 1851. CLASS VI. 78.

**HEMP AND WIRE ROPES OF EVERY DESCRIPTION.**

JOSEPH CRAWHALL AND SONS, ST. ANN'S HEMP AND WIRE ROPE WORKS, NEWCASTLE-ON-TYNE.

**HALEY'S PATENT LIFTING JACK,** MANUFACTURED BY THE INVENTOR, JOSEPH HALEY, ALBION STREET, GAYTHORN, MANCHESTER.

SCREW JACKS, SHIP JACKS.

SLIDE AND CENTRE LATHES, PLANING, SHAPING, BORING, DRILLING, SCREWING, WHEEL CUTTING, AND OTHER MACHINES.

RIVET MAKING MACHINES.

**THE SECRET INFIRMITIES OF YOUTH AND MATURITY.** Just published, price One Shilling; post free, in an envelope, for 13 stamps.

**SELF-PRESERVATION; a Medical Treatise on the Cure of Nervous and Generative Debility,** resulting from vicious habits acquired during the critical passage from youth to manhood, with Practical Observations on the Physiology of Marriage, in its social, moral, and physical relations. To which are added, Remarks on the Wonders of the Microscope in revealing the hidden mysteries "of life within life," and its advantages in detecting, by urinary examination, the cause and effect of every variety of these complaints, with numerous engravings and cases. By SAMUEL LA'NETT, M.D., 37, Bedford-square, London.

Also, by the same Author, price 1s.; free by post for 13 stamps. **THE SCIENCE OF LIFE; or, How to Ensure Moral and Physical Happiness.** Published by J. Allen, 20, Warwick-lane, Paternoster-row; and may be had of Mann, 39, Cornhill; Horne, 19, Leicester-square; Gordon, 148, Leadenhall-street; or from the Author, who may be consulted daily, from Eleven till Two, and from Six till Eight, at his residence, 37, Bedford-square, London.

**THE GREAT EUROPEAN REMEDY FOR NERVOUSNESS, RELAXATION, AND EXHAUSTION.** Protected by Royal Letters Patent, and sanctioned by all the great Continental Colleges of Medicine.

**DR. DE ROOS' CELEBRATED GUTTA VITÆ, OR LIFE DROPS,** are the great European remedy for Spermatorrhea, Exhaustion, Nervousness, Debility, Incapacity for Society, Study, or Business, Shaking of the Hands and Limbs, Indigestion, Flatulency, Shortness of Breath, Consumptive Habits, Diseases of Sight, Dizziness, Pains in the Head, Eruptions, Blisters, Pimples, Sores, Tarsus, Pains in the Bones and Joints, Scurvy, Scrofula, and all those diseases for which mercury, sarsaparilla, &c., are not only employed in vain, but too often to the utter destruction of the sufferer's health. Their almost marvellous powers must be felt to be believed. Hundreds of apparently hopeless cases, which had been given up by the faculty, have been speedily cured, and many thousands have derived almost miraculous relief, when everything else had signally failed.

Price 11s., and four times the quantity 38s. per bottle, obtainable through all medicine vendors; of whom also may be had the "Medical Adviser," 2s. 6d. in sealed envelope; or it may be sent direct from the author for 42 penny stamps.

Advice and medicines sent to any address secure from observation, on receipt of a full detail of the case and the usual fee of £1. Post-office orders payable at the Holborn Office to Walter De Roos, M.D., 48, Berners-street, Oxford-street, London. Hours for personal consultation daily from Eleven till Four, Sundays excepted.

N.B. Should difficulty arise in procuring the above, enclose the amount per Post-office order, or otherwise, to 10, Berners-street, and they will be sent securely packed per return.



## THE MINING SHARE LIST.

Share.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
1120	Alfred Consols (cop.), Palliser (S.E.)	21. 10s. 10d.	21 10	15 15	12 10	4-0-0 Oct. 3, 1887.
1120	Ballewidden (tin), St. Just	11 1/2	11 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
4000	Bedford United (copper), Tavistock	21. 6s. 8d.	21 6	15 15	12 10	4-0-0 Oct. 3, 1887.
200	Boscon (tin), St. Just	20 1/2	20 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1200	Brickfield and Froggatt Grove, Derbyshire	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
100	Brayford Hall (lead), Flint	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Bryatall, Llanidloes, Montgomeryshire	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
430	Buddick Consols (tin), Perran	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
6000	Bwch (silver-lead), Cardiganshire	21. 1s. 6d.	21 1	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Carn Brea (copper, tin), Illogan	15 1/2	15 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
2043	Carnarvon (tin), St. Just	4 1/2	4 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
200	Cefn Cwrm Brynno (lead), Cardiganshire	4 1/2	4 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
2000	Collascombe (copper)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	Condarro (copper, tin), Camborne (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Craddock Moor (copper), St. Cleer	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
30000	Craven Moor, Limited (lead), Yorkshire	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	Cwmystwith (lead), Cardiganshire	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Derwent Mines (silver-lead), Durham	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	Devon Great Consols (cop.), Tavist. (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
672	Ding Dong (tin), Gwilt	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	Doleath (copper, tin), Camborne	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
12000	Drake Walls (tin, copper), Calstock	21. 1s. 6d.	21 1	10 10	12 10	4-0-0 Oct. 3, 1887.
300	East Daren (lead), Cardiganshire	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
2043	East Falmouth (lead)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	East Pool (tin, copper), Pool, Illogan	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	East Wheel Margaret (tin, copper)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	East Wheel Margaret (tin, copper)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1400	Evan Mining Company (lead), Derbyshire	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
4000	Fowey Consols (copper), Tywardreath	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
4414	General Mining Co. for Ireland (cop., lead)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
3000	Goginan (silver-lead), Cardiganshire	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Gonnamna (copper), St. Cleer	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
240	Graham and St. Aubyn (copper)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
6000	Great South Tolgus (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
20000	Great Wheel Vor (tin, cop.), Helston (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
119	Great Work (tin), Gernoe	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Herodstot (lead), near Liskeard	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
6000	Heron Down Consols (copper), Calstock	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
3000	Holyford (copper), near Tipperary	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
2500	Isle of Man (Limited)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
70	Jamaica (lead), Mold, Flintshire	21. 1s. 6d.	21 1	10 10	12 10	4-0-0 Oct. 3, 1887.
20	Laxey Mining Company, Isle of Man	1000	1000	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Levant (copper, tin), St. Just	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
3000	Lewis Mines (tin, copper), St. Erth	21. 1s. 11d.	21 1	10 10	12 10	4-0-0 Oct. 3, 1887.
400	Liburnia (lead), Cardiganshire, Wales	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
6000	Marke Valley (copper), Cardigan	21. 1s. 6d.	21 1	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Merthyr Hill (lead), Somerset	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Merthyr Hill (lead), Somerset	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Misra Mines (Limited)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
30000	Mining Co. of Ireland (copper, tin, coal)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
5000	Nantow and Penrhyn, Limited (21 1/2 shares)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
6000	New North Wales (copper), St. Cleer	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
470	Newtown Mining Company, Co. Down	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
300	North Pool (copper, tin), Pool	21. 1s. 10d.	21 1	10 10	12 10	4-0-0 Oct. 3, 1887.
140	North Rosker (copper), Camborne	21. 7s. 6d.	21 7	10 10	12 10	4-0-0 Oct. 3, 1887.
6000	North Wheel Bassett (cop., tin), Illo. (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
4000	Par Consols (copper), St. Blaise (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
300	Peak United (lead), North Derbyshire	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
300	Phoenix (copper, tin), Linkingborne	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Polbarro (tin), St. Agnes (Preston)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
500	Provident Mines (tin), Ury Lelant	21. 1s. 2d.	21 1	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Rhosydwol and Bacheland (lead)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
512	Rosewarne United (copper, tin), Gwennap	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
13000	Sortridge Consols (cop.), Whitcomb (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
230	South Caradon (copper), St. Cleer (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	South Crinola (copper), St. Austell	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
200	South Tolgus (copper), Redruth, Cornwall	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
400	South Wheel Frances, Illogan (S.E.)	21. 1s. 9d.	21 1	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Sparrow Consols (tin), St. Just, Cornwall	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Sparrow Consols (tin), St. Just	21. 7s. 8d.	21 7	10 10	12 10	4-0-0 Oct. 3, 1887.
3000	St. Aubyn and Grylls (cop., tin), Breage	21. 8s. 4d.	21 8	10 10	12 10	4-0-0 Oct. 3, 1887.
10000	St. Day United (tin and copper)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
94	St. Ives Consols (tin), St. Ives	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
6000	Tamar Consols (sil.-lead), Beerhead (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Tincoff (copper, tin), Pool, Illogan (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
2043	Treban (silver-lead), Menheniot	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
512	Trevelyan Consols (tin), St. Ives	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	Trevelyan (copper), Gwennap, Cornwall	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	Trevelyan (copper), Gwennap, Cornwall	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
4000	Trevelyan (copper), Gwennap, Cornwall	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
4000	Trevelyan (copper), Gwennap, Cornwall	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
100	Trumpet Consols (tin), near Helston	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
400	United Mines (copper), Gwennap (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
30000	Val of Towry (lead), Carmarthen (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
512	Wendron Consols (tin), Wendron	21. 7s. 8d.	21 7	10 10	12 10	4-0-0 Oct. 3, 1887.
6000	West Caradon (copper), Illogan (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
230	West Caradon (copper), Liskeard (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	West Darnley (copper), Gwennap	21. 7s. 8d.	21 7	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	West Darnley (copper), Gwennap	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
400	West Wheel Seton (copper), Camborne	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1233	Wheel Arthur (copper), Calstock	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
140	Wheel Bal (tin), St. Just	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
312	Wheel Bassett (copper), Illogan (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
250	Wheel Buller (copper), Redruth (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Wheel Charlotte, Penryn, Cornwall	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
250	Wheel Clifford (copper), Gwennap	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
6000	Wheel Fortunes, Bodmin	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
120	Wheel Friendship (copper), Devon	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Wheel Grylls (copper, tin), Breage	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
512	Wheel Jane (silver-lead), Kea	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Wheel Kitty (tin), St. Agnes	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Wheel Kitty (tin), Ury Lelant (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
444	Wheel Margaret (tin), Ury Lelant	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Wheel Mary Ann (lead), Menheniot (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
400	Wheel Oria, St. Just, Cornwall	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
100	Wheel Reth (tin), Ury Lelant	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
100	Wheel Reth (tin), Ury Lelant	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Wheel Tremayne (sil.-lead), Liskeard (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
1000	Wheel Tremayne (sil.-lead), Liskeard (S.E.)	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
4000	Wheel Wrey (lead), St. Ives	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.
5000	Wicklow (copper), Wicklow	21 1/2	21 1/2	10 10	12 10	4-0-0 Oct. 3, 1887.

\* Dividends paid every two months. † Dividends paid every three months.

## FOREIGN MINES.

Share.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
4000	Altan Mining Company (copper), Norway	21 1/2	21 1/2	10 10	12 10	4-0-0 Nov. 31, 1885.
2464	Burra Burra (copper), South Australia	114	114	10 10	12 10	4-0-0 Nov. 31, 1885.
12000	Cobre Copper Company (cop.), Cuba (S.E.)	40	40	10 10	12 10	4-0-0 Nov. 31, 1885.
10000	Copago Mining Company, Chili (S.E.)	10	10	10 10	12 10	4-0-0 Nov. 31, 1885.
20000	General Mining Assoc., Nova Scotia (S.E.)	10	10	10 10	12 10	4-0-0 Nov. 31, 1885.
15000	Linares (lead), Potosi, Bolivia (S.E.)	10	10	10 10	12 10	4-0-0 Nov. 31, 1885.
10000	Lustitius (of Portugal) (S.E.)	10	10	10 10	12 10	4-0-0 Nov. 31, 1885.
10000	Marquitas and New Granada (S.E.)	10	10	10 10	12 10	4-0-0 Nov. 31, 1885.
25000	Peninsular Mining Company (Limited)	20	20	10 10	12 10	4-0-0 Nov. 31, 1885.
10000	Pontebland (silver-lead), France (S.E.)	20	20	10 10	12 10	4-0-0 Nov. 31, 1885.
7000	Rio Santiago (copper), Cuba (S.E.)	10	10	10 10	12 10	4-0-0 Nov. 31, 1885.
10000	St. John del Rey	10	10	10 10	12 10	4-0-0 Nov. 31, 1885.
48174	United Mexican (silver), Mexico (S.E.)	20 1/2	20 1/2	10 10	12 10	4-0-0 Nov. 31, 1885.
30000	Mexican and So. Amer. Smelting Co. (S.E.)	10	10	10 10	12 10	4-0-0 Nov. 31, 1885.
81676	North British Australasian (S.E.)	1	1	10 10	12 10	4-0-0 Nov. 31, 1885.

## NON-DIVIDEND FOREIGN MINES.

Shares.		Paid.	Last Price.	Present.	Shares.		Paid.	Last Price.	Present.
20000	Australasian (S.E.)	1	7	10 10	40000	Mount Carbon (coal), Virginia.	1	—	—
40000	Chancellorville Freehold	1	4s. 6d.	5s. 3d. 6d.	50000	New Granada (S.E.)	1	—	—
50000	Clarendon Consols (S.E.)	1	4s.	4s. 4s 6d	10000	New Grand Duchy of Baden	1	—	—
53040	Cologne Mining Company	£1 4	—	—	200000	Nouveau Monde (S.E.)	1	—	—
350000	Copper Miners of Eng. (S.E.) Stock	25	26	27	100000	Port Phillip	1	—	—
12000	Dalt. Pref., 7½ per cent. (S.E.)	25	1 1	1 1	6000	Quebec and Canada	1	—	—
24000	Fortuna	4	1 1	1 1	7725	Strathbally (Limited)	1	—	—
7300	Kinnaird (S.E., Gen'l)	1	1 1	1 1	4830	Dalt. Preference, 10 per cent.	1	—	—
5000	Liberty, Virginia	1	—	—	35425	Wheat Jamaica (copper)	14s.	14s.	16s.
20000	London and Virginia	17s.	—	—	75000	Wildberg (all-lead, copper)	2	1	1